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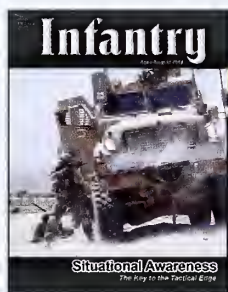
Situational Awareness
The Key to the Tactical Edge

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FRONT COVER:

A U.S. Army paratrooper with the 82nd Airborne Division's 1st Brigade Combat Team fires his M4 carbine at insurgents during a firefight on 30 June 2012 in Ghazni Province, Afghanistan. (Photo by SGT Michael J. MacLeod)

BACK COVER:

U.S. Army Soldiers from 1st Platoon, Company A, 1st Battalion, 2nd Infantry Brigade Combat Team, Task Force Blackhawk, cordon off a village's town square near Combat Outpost Yosef Khel in Afghanistan on 10 March 2012. (Photo by SGT Ken Scar)

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Volume 101, Number 2

FEATURES

- 26 **ASAT: NEW COURSE PROVIDES SOLDIERS WITH CRITICAL SKILL**
COL Walter E. Piatt
- 28 **WARFIGHTER LOAD, SURVIVABILITY, AND SHOOT-AND-MOVE DYNAMICS**
Christopher Palmer
- 33 **BCT 2020: EXPLORING POSSIBLE FUTURE ORGANIZATIONAL DESIGNS**
LTC (Retired) Robert W. Lamont, U.S. Marine Corps

DEPARTMENTS

- 1 **COMMANDANT'S NOTE**
- 2 **INFANTRY NEWS**
- 4 **PROFESSIONAL FORUM**
 - 4 **MBL EVALUATES EMERGING TECHNOLOGIES**
MAJ James B. Collins
 - 7 **DIVERSITY IN THE INFANTRY OFFICER CORPS: OUR RESPONSIBILITY**
LTC Eric Lopez
 - 10 **INFORMATION DISCIPLINE AND MISSION COMMAND**
CPT Justin Lynch
 - 12 **TEACHING INSURGENCY THROUGH THE PRISM OF THE AMERICAN REVOLUTION**
CPT Darrell E. Fawley III
 - 17 **A CURRENT ASSESSMENT OF EXCALIBUR EMPLOYMENT IN AFGHANISTAN**
COL Gene Meredith, MAJ David Moser, CPT Andrew Zikowitz, and Daniel Hallagin
 - 21 **EGYPTIAN GENERAL MOHAMED FAWZI — PART II: REFLECTIONS ON THE IMPACT OF THE YEMEN GUERRILLA WAR ON EGYPTIAN MILITARY THINKING**
CDR Youssef Aboul-Enein, U.S. Navy
- 38 **TRAINING NOTES**
 - 38 **U.S. ARMY RANGER SCHOOL — MOUNTAIN PHASE**
5th Ranger Training Battalion
 - 41 **DSTS: SYSTEM PROVIDES FLEXIBLE, REALISTIC SQUAD TRAINING**
CSM Steven W. McClafflin
 - 44 **LESSONS FROM OPERATION NEW DAWN: TEACHING TRAINING MANAGEMENT AND CRITICAL MARKSMANSHIP SKILLS TO THE IA**
MAJ Marc S. Cichowicz
 - 47 **WARRIOR ATHLETIC TRAINING: UNEXPECTED BENEFITS OF ARMY-UNIVERSITY COLLABORATIONS**
Amanda Pizzi and JoEllen Sefton, Ph.D
 - 50 **CONGRESSIONAL FELLOWSHIP PROGRAM OFFERS UNIQUE OPPORTUNITIES**
MAJ Tim Meadors
- 51 **BOOK REVIEWS**

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Commandant's Note

COL DAVID B. HAIGHT

SITUATIONAL AWARENESS

THE KEY TO THE TACTICAL EDGE

Simply put, situational awareness is knowledge of what is going on around you. It includes not only real-time knowledge of the enemy and the environment, but also demands interpretation of an enemy's capabilities and likely future courses of action. This implies a need for better understanding of the human domain as it relates to Soldiers' ability to operate under some of the most adverse and demanding conditions imaginable. As we train, field, and sustain the resilient, lethal, survivable Infantry teams who prosecute the global war on terrorism, we must hone our ability to receive, assimilate, and disseminate data. We must spare no effort to make sure Soldiers are trained and practiced in the tactics, techniques, and procedures necessary to move fast, strike hard, and win. In this Commandant's Note I want to highlight some of the initiatives that we are employing to expand our situational awareness to levels far beyond anything envisioned even two decades ago.

When Defense Secretary Leon Panetta outlined his strategic vision, he alluded to the importance of unmanned systems, and today we see their value in the tactical and targeting data already provided by unmanned aerial and ground sensing systems. Some of these systems are man-portable and give us eyes and ears in areas tactically or physically inaccessible to Soldiers. The value of these systems is not limited to combat but also finds application in assuring the integrity of our own borders and in the civilian law enforcement field.

Cultural awareness training remains integral to achieving situational awareness. As Soldiers come to better understand the language and nuances of their operational environment, they become adept at identifying behavior patterns that are out of the ordinary, but this is not enough. We must train Soldiers to react to such indicators and not ignore them. The cost of relaxed vigilance became clear in the Moro surprise bolo attack on the 9th Infantry garrison on Samar, Philippines, on 28 September 1901. The night before the attack, about 60 tribesmen gathered in the small village church, but no one thought this was unusual. That night they began chanting, and around midnight women and children began leaving the village. The sergeant of the guard failed to report any of this to the company commander, and more than 100 warriors attacked the unarmed garrison, killing three officers and more than 44 Soldiers at breakfast. Survivors, many of them grievously wounded, were barely able to get to their rifles and fight their way to boats and safety. Today, Soldiers find themselves operating in town and village environments where the enemy can readily blend in and amidst a populace whose attitude may be tolerant, neutral,

supportive of the insurgent, or openly hostile toward U.S. forces. This why foreign language proficiency and cultural knowledge are so critical and can enhance situational awareness.

To meet the demands for relevant, timely situational awareness training, the Maneuver Center of Excellence (MCoE) has introduced an Advanced Situational Awareness Training (ASAT) course (see pages 26-27) whose faculty includes members of the 197th Infantry Brigade and contract civilian instructors whose experience includes deployments to hot spots here at home and across the globe. The skill set offered to students attending ASAT will enable them to identify potential threats, report them, and take steps to reduce them. We live in a different world than the one in which we were raised. The threat is both different and widespread, the adversaries are deadly serious and know no bounds, and most of our citizens are unaware of the complexity of the threat. This is why training in developing and sustaining situational awareness is going to be imperative if we and our society are to meet the challenges of this century.

The challenge of presenting ASAT to the operational force is great, and the MCoE response to meet it is concomitantly broad. It will be presented to units within the Army Force Generation cycle, to Initial Entry Training and Initial Military Training Soldiers and future leaders, and in institutional training curricula. As the skill sets and principles of ASAT permeate the force, we will have created generations of Soldiers and leaders with an understanding of situational awareness that enables them to assess what is going on around them, to communicate what they see, and to take the steps necessary to resolve a potential problem.

Today's Infantryman is the best-trained, most lethal, and best-supported Soldier our nation has ever fielded, and comprehensive situational awareness training is one way we can ensure that he will remain the dominant force on the battlefield, wherever his duty calls him. The best we can provide him is the least that we owe him.

Follow me! One force, one fight!





SOLDIER AVATARS ENHANCE SIMULATIONS

KATY YOUNG

The Army is in the early stages of creating avatars for the purpose of training in virtual environments. Avatars are digital representations (virtual characters) that can be integrated into computer-based virtual simulations. By using technology similar to modern video games, each Soldier has the potential to enhance his quality of training using a personalized Soldier avatar. They can be two or three-dimensional depending on the type of simulation and can include facial recognition to resemble any person or Soldier. The envisioned avatars would ideally reflect each Soldier's real-life abilities or skills based on PT scores, weapons qualifications, stamina levels as well as height and weight. The key is to use quantifiable measures for tracking data so that the Soldier avatar will accurately reflect the individual's capabilities, thus enhancing training.

So what does this mean for Soldiers? The idea is to create as close a likeness as possible, even if it means showing Soldiers their own faults. Not all Soldiers are created equal, which means that some Soldier avatars will be larger and slower than others. Because the Soldier avatar is a virtual representation of the individual, Soldiers may feel connected to it and responsible for its performance. In order for their avatars to perform well, Soldiers will have to improve their own skills. For example, if a Soldier

qualifies as a marksman, then his avatar will not shoot as well as one whose Soldier qualifies as expert. This creates the potential for competition among Soldiers as well as units. The majority of Soldiers will excel through the increased competition because it is natural to want to be better than the next man, and avatars give Soldiers the opportunity to see their involvement in a mission. The intent is that the avatar will follow a Soldier throughout his career, changing with him in aspects of training, military education, and self-development. The desired outcome is to encourage Soldiers to improve physical training and weapons qualifications scores in order to attain optimum levels of performance resulting in Soldiers who are at their best physically as well as mentally.

The Army has been using virtual training simulations to optimize training for several years. Through the integration of personalized avatars, Soldiers will be able to better understand every aspect of the operational environment (OE). It is important Soldiers understand they are an element of the OE and how they can impact the mission based on that knowledge. This kind of training has the potential to improve Soldiers' ability to make quick decisions and also teach them how to correct mistakes and think critically on the battlefield. The idea is to have a safe, controlled environment where Soldiers can learn tactics, the mission, and the best way to assess the situation. Soldiers will be optimizing field



Avatars will ideally reflect each Soldier's real-life abilities or skills based on PT scores, weapons qualification, stamina levels as well as height and weight.

Graphics courtesy of MCoE Directorate of Training and Doctrine

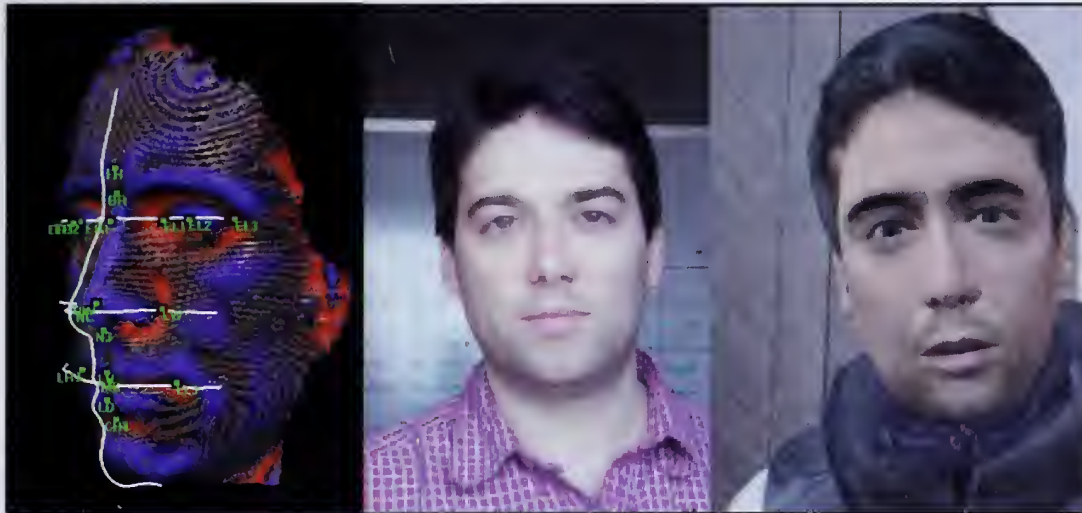


Figure 1 — Facial Recognition

time because they will have made their mistakes in simulation, learned from them, and then altered the situation to fit the needs of the mission.

This type of training has endless possibilities to create situations that are as close to real life as possible through information gathered from previous missions and other collected data. Simulations are already in place and with the addition of personalized avatars, training can be conducted in a more realistic and effective manner that focuses on Soldier readiness. Simulations using Soldier avatars can help Soldiers visualize the objective in order to successfully engage and complete the mission. Simulations allow Soldiers to familiarize themselves with the terrain before deployment. Being able to repeatedly rehearse a mission could also increase the Soldier's confidence in himself and his unit, which is important for developing and maintaining trust within the unit.

Soldiers are not the only ones who could benefit from avatars. Leaders would also be able to assess their Soldiers' capabilities through the simulated missions. They could note any individual strengths and weaknesses and establish a plan of action for any necessary adjustments with after action review (AAR) capabilities. Avatar simulators also provide leaders with an idea of how their Soldiers will react in a real-world OE. This is not to say that a Soldier's natural leading ability will be affected. If anything, it will be enhanced and encouraged. Being able to run multiple missions in different environments and circumstances provides experience a

Soldier could not get elsewhere. This training can be a valuable tool at platoon and company levels through teaching Soldiers the value of success as a team as well as the consequences of bad decisions in a controlled environment. There is also the possibility for force-on-force training so that battalions or companies from different military installations can interact with one another on the virtual battlefield in preparation for deployment or other training.

Avatar training not only has the potential to enhance Soldier performance, it would also be cost effective. The intent is for the Army to utilize current simulations such as Virtual Battle Space 2 (VBS2) so that no additional systems would need to be created. The Army is currently using several different simulations to optimize training. Each simulation would apply the Soldier avatar differently. Some simulations allow the Soldier to have complete control as with the Close Combat Tactical Trainer (CCTT) where Soldiers learn to drive tanks and other military vehicles before they go into the field. Other simulations give Soldiers the opportunity to control a simulated character in order to complete a mission as with VBS2. The current simulated characters are not personalized so they operate at an idealized level with no errors. This type of training is not realistic and does not take into consideration how the Soldier would perform. Using personalized Soldier avatars, every time a Soldier trains in simulation his scores would be applied to his avatar so that its performance stays in

line with that of the Soldier. The Army would be able to apply and update avatars through the interconnectivity among simulations using Digital Training Management Systems (DTMS) to allow for more effective training as well as to keep costs low. This is not to say there will be no costs associated with the avatar; however, it has the potential to save money in the long run. The cost for running and maintaining ranges and field time is very expensive. Ammunition and operational tempo (OPTEMPO) alone

can be astronomical, especially when considering how many times a Soldier needs to go through the exercise to correct his mistakes. Soldiers can go through the same field exercises in simulation as many times as necessary at a fraction of the cost.

The Army has the potential to create the kind of training that will instill confidence and readiness in Soldiers like never before. The possibilities are endless using this kind of thinking and technology. It is no secret that computer technology is advancing at a rapid rate, so it only seems sensible for the Army to catch up to speed. This kind of training could completely change the way battles are fought and won.

Since the Soldier avatar is still in the conception stage, there are still factors that need to be taken into account. It is important to ensure our Soldiers will receive the best training possible because we are still at war. This is where having insight from outside sources and those who are currently on the front lines become helpful. How can Soldier avatars be made better? What aspects have been overlooked? What's missing? In order to ensure our Army remains the best in the world, it requires cutting-edge training using the current technology to stay ahead of the enemy.

(Katy Young is an intern for the Directorate of Training and Doctrine's Systems Training Branch, Maneuver Center of Excellence, Fort Benning, Ga. She is currently attending Columbus State University and studying professional writing.)



MBL EVALUATES EMERGING TECHNOLOGIES

MAJ JAMES B. COLLINS

The Maneuver Battle Lab (MBL) at the Maneuver Center of Excellence (MCoE), Fort Benning, Ga., conducts live, virtual, and constructive experiments and assessments on emerging technologies in an effort to inform requirements and provide the warfighter with the most advanced capabilities to defeat today's ever-changing threats. The Live Experimentation Branch has teams that focus on Soldier, mounted, battle command, and unmanned systems.

The MBL conducts many experiments and assessments through the course of the year. Two of the recurring robotic events are the Army Expeditionary Warfare Experiment (AEWE) and the Robotics Rodeo. Other technologies are presented to the MBL by various government agencies for experimentation and/or assessment that will ultimately inform the acquisition process. Recent examples include the Supervised Autonomy to Neutralize and Detect IEDs (SANDI), Redshirt, and Expendable Unattended Ground Sensors (E-UGS).

AEWE

AEWE is the U.S. Army Training and Doctrine Command's (TRADOC) principal live-prototype experiment that is now in its eighth year (Spiral H) of an



Photos courtesy of author

The Maneuver Battle Lab recently assisted with an assessment of two technologies designed to defeat victim-operated improvised explosive device (VOIED) threats — the Supervised Autonomy to Neutralize and Detect IEDs (SANDI) (top) and Redshirt (bottom).

experiment campaign designed to enhance development efforts for current and future brigade combat team formations. AEWE is a live, Soldier-focused, network-enabled experiment that provides a venue for aggressive experimentation with emerging technologies and concepts. This event is scheduled every 12-18 months and is conducted at the MCoE. Typically, AEWE

focuses on prototype technologies which are suitable for tactical environments and come in at various technology readiness levels (TRLs).

AEWE provides capability developers, the stability and training community, and industry with a repeatable, credible, rigorous, and validated operational experiment venue to support doctrine, organization, training, and leader development (DOTL) concepts and materiel development efforts. By linking AEWE to critical programs, program managers, TRADOC capabilities managers, and program executive officers can leverage this Soldier-focused, network-enabled venue to enhance their program objectives and get equipment into the hands of Soldiers earlier, enabling industry to accelerate prototype development.

Spiral G's overarching objective was to support and inform the "Squad: Foundation of the Decisive Force" initiative. Objectives focused on enabling the squad to maintain overmatch so they could set favorable conditions to outmaneuver the enemy rather than reacting to surprise and uncertainty. AEWE Spiral G sought doctrine, organization, training, materiel, leader development, personnel, and facilities (DOTMLPF) solutions in

the areas of training, leader development, and materiel (network, mobility, force protection, power and energy, and lethality).

Spiral G experimented with more than 40 technologies, and more than 100 government and contractor personnel participated in this experiment. Additionally, more than 60 experimental force (EXFOR) Soldiers from Fort Benning and Fort Bliss, Texas, as well as 30 opposing force (OPFOR) Soldiers provided by the TRADOC Intelligence Support Activity (TRISA) participated in the three-case experiment.

The Army Test and Evaluation Command provided insights in the areas of Soldier power, Soldier resupply, robotic systems (ground and air), the robotics section and communications, and an early assessment of promising technologies.

Spiral H is scheduled for execution during January and February 2013 and was preceded by the technology selection in December 2011. Planning, preparation, and execution events was coordinated and refined during the initial planning conference in February 2012, with follow-up mid, interim, and final planning conferences scheduled throughout 2012. Spiral H objectives include:

- Identify and assess solutions that enhance networked capabilities of the Soldier and small unit (mounted and dismounted).
- Identify and assess solutions for Soldier load, power and energy generation, storage or distribution, advanced unmanned systems, and small unit resupply.
- Identify and assess systems that

enhance small unit training, mission planning, and rehearsals; identify and assess systems/methods that enhance training and leader development and/or reduce the cognitive load on leaders.

- Identify and assess mounted and dismounted systems that enhance lethality, mobility and force protection for Soldiers and small units.

- Identify and assess doctrinal and materiel solutions to counter advanced enemy threats and capabilities.

- Enable the squad to achieve overmatch by seeking DOTMLPF solutions in the areas of fire support.

As combat operations continue in overseas contingency operations, the MCoE provides support to organizations that develop warfighting capabilities that improve military effectiveness against persistent and capable enemies. Victim-operated IEDs (VOIEDs), which include munitions controlled by passive infrared, pressure plate and trip wire-activated triggers, remain a potent danger and continue to pose a threat to U.S. forces.

Robotics Rodeo

Circa 2007, the value of unmanned systems and robotics in military operations became evident. However, the Army's process and methodology for assessing and selecting technologies from the plethora of emerging platforms and capabilities seemed to lack organization and focus.

In response to systemic challenges and operational needs statements (ONS), the

"The rodeo served as a decisive step by the Army to evaluate and focus on emerging solutions that address relevant gaps in warfighting capability by providing leaders and decision makers a snapshot of the state of robotics and information about systems that could fill gaps."

commander of III Corps and Fort Hood, Texas, commissioned the first Robotics Rodeo. The robotics industry was invited to the event held at Fort Hood from 31 August to 4 September 2009. Forty companies took part in the Robotics Technology Observation Demonstration and Discussion (RTOD2) and were required to perform task-based open events observed by Soldiers and government experts.

The rodeo served as a decisive step by the Army to evaluate and focus on emerging solutions that address relevant gaps in warfighting capability by providing leaders and decision makers a snapshot of the state of robotics and information about systems that could fill gaps. The event also served as a foundation for Army decision makers to refocus resources and get unmanned systems fielded to the force more quickly.

Designated the lead for Army ground robotics, the MCoE assumed responsibility for hosting follow-on rodeos. As the experimentation lead for the MCoE, the MBL was given the task of planning and conducting the 2010 Robotics Rodeo in coordination with the Tank Automotive Research, Development and Engineering Center (TARDEC). The rodeo was held 4-16 October 2010 at Fort Benning. During this rodeo, more than 25 technologies participated in the RTOD2 and the extravaganza which gave the Army an opportunity to determine the current state of robotic capabilities and assist in determining their military utility.

The 2012 Robotics Rodeo was held 20-29 June at Fort Benning (see page 6).

SANDI/Redshirt

The MBL recently assisted JIEDDO with an assessment of two technologies designed to defeat the VOIED threats



Photo by John D. Helms

During the 2010 Robotics Rodeo at Fort Benning, participants examine one company's products.

and save lives. The MBL's unmanned system team conducted a limited objective experiment in September 2011 to develop concepts and TTPs for the employment of supervised autonomy to neutralize and detect IEDs (SANDI) and Redshirt technologies. This experiment replicated the mounted tactical movement of a small maneuver unit with SANDI or Redshirt in a tactical environment that included VOIED threats and the uncertainty of noncombatant activities.

SANDI is a drive-by-wire appliqué mounted on the M1115 up-armored high mobility multi-purpose wheeled vehicle (HMMWV), and the Redshirt appliqué is mounted on a tracked platform that enables respective platform operators to accelerate, stop, and steer the unmanned systems while they pull/push lane-proofing equipment. During the experiment, the platforms were remotely controlled by the operators following in command and control vehicles at safe distances. The systems encountered the triggers and detonated the VOIEDs while Soldiers, the lead squad of a maneuver unit, were a safe distance from the engagement areas.

Soldiers were exposed to relevant challenges by conducting the experiment in a structured live environment. The platform operators and key leaders worked through the situations. Their experiences were observed, analyzed, and translated into relevant findings about the impact of the systems on maneuver forces and the conduct of operations. The findings underpinned concepts of operations (CONOPs), TTPs, and programmatic recommendations made by the MBL. CONOPs and TTPs were adjusted to incorporate the unique requirements identified by formations conducting operations with the systems. SANDI and Redshirt will be deployed to conduct limited operations in overseas contingency operations this fiscal year.

E-UGS

An expendable unattended ground sensor is a seismic sensor system capable of detecting footstep and vehicle traffic in remote locations. E-UGS consists of a Toughbook user interface with touch screen and user software, RF receiver unit, antennas, cables, and seismic sensors. The MBL has worked with Project Manager Robotics and Unmanned Sensors (PM-RUS) since mid-2010 during experiments to assess system capability, develop CONOPs and TTPs, and assist with training packages. E-UGS is currently in use in Operation Enduring Freedom, and MBL personnel recently conducted an in-theater assessment (ITA). Several recommendations came from warfighters during the ITA, and further development is ongoing.

Additional information on any of the above topics can be obtained through the MBL Unmanned Systems Team. Points of contact for additional information are MAJ James B. Collins, (706) 545-2921, james.collins2@us.army.mil; Keith Singleton, (706) 545-5285, keith.singleton.civ@mail.mil; or Tollie Strode, Jr., (706) 545-5203, tollie.strode.ctr@mail.mil.

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2012 Robotics Rodeo

More than 40 vendors and five universities showcased nearly 75 different technologies during the 2012 Robotics Rodeo that was held 20-29 June on Fort Benning.

Sponsored by TARDEC and JIEDDO, through the Maneuver Battle Lab, the Robotics Rodeo brings together the defense, homeland security, academia and industry communities to energize robots in support of the warfighter.

"It's a great marriage of both industry and academia, which is what we strive for," said Harry Lubin, the Maneuver Battle Lab's Live Experimentation Branch chief. "Fort Benning is the proponent for Army ground robotics, so it was a great fit. A difference this year is we focused on specific tactical events."

Innovators participated in task-based scenarios and open robotics demonstrations aimed at motivating industry, educating developers, and gaining insight into the current and emerging state of ground robotics technology and artificial intelligence, officials said. From an Army standpoint, it was an opportunity for scientists and engineers from government and industry to link up with Soldiers who might someday employ the robots and unmanned systems in combat.

Addressing capability caps in defeating the IED threat was a central theme throughout the rodeo, said Jim Parker, associate director for ground vehicle robotics at TARDEC. This year, it was set up for unmanned platforms to perform in three operational vignettes: they had to provide supplies, dig hasty fighting positions for a squad, and autonomously search and detect the presence of opposing forces.

The event was the first time JIEDDO participated in a challenged-based acquisition process, said Matt Way, a program integrator with the agency, which was created to attack networks, train the force, and defeat the device. The organization set up four events — endurance, detection, disruption, and reconnaissance — based on problem sets where robots could play a role in counter-IED operations.

"We definitely learned some lessons," Way said. "There are some things we can tweak and improve, but overall, we were impressed with how everything ran and the results we saw. We use our intel arm to keep track of the latest (enemy) trends out there and try to look ahead at where we need to be in delivering new technology. Robotics take the man out of the loop, and any time we can find a solution with mobility and suitability to support the Soldiers, it's better to put that robot in harm's way than the individual."

The robots on display at the event ranged in size from handheld devices to 4,500-pound vehicles, said Ed Davis, the Maneuver Battle Lab's deputy director. Outcomes will be used to further support the MCoE's "Squad: Foundation of the Decisive Force" initiative by advancing possible robotic technology solutions.

"Most of the time, those who engage enemy forces are at that squad level, so we're looking at how we can reduce the load on a Soldier," he said. "With robotics, we're looking at whether we can off-load some of that equipment and then get it to him when he needs it. It also increases his situational awareness. If he knows more about what he's up against when he has a mission, he can tailor that load specifically for that. We're looking at a lot of things in trying to help Soldier effectiveness in that small unit."

— Vince Little, *The Bayonet*, 4 July 2012

DIVERSITY IN THE INFANTRY OFFICER CORPS: OUR RESPONSIBILITY

LTC ERIC LOPEZ

Currently, the number of minority officers in the Infantry branch does not reflect the diversity of the U.S. Army or the nation. This paradigm does not comply with the Military Leadership Diversity Commission objectives which instruct the U.S. military to systematically develop a demographically diverse leadership that reflects the public it serves and the forces it leads.¹

The Infantry officer corps is missing the strength that comes with diversity, and it is critical that the branch adapts to meet a changing demographic landscape in which minority populations are growing rapidly.² Though African Americans make up 12 percent of the U.S. population and 13 percent of the entire U.S. Army officer corps, they only make up 5 percent of the Infantry officer corps.³ Hispanics are even less represented. Though they make up 16 percent of the population, Hispanics only fill 5 percent of the U.S. Army officer corps and only 5 percent of the Infantry officer corps. This article argues that one of the primary causes for the lack of diversity in the Infantry officer corps is the scarcity of minority senior leaders. Only 5 percent of the current Infantry battalion commanders are black and only 3 percent are Hispanic.⁴ This lack of minority senior leaders creates an environment in which minority cadets and junior officers have few minority senior leaders to emulate and therefore either do not access into the Infantry or decide to career field designate (CFD) into other branches.

We can break this cycle by focusing on three critical stages in an officer's career — at the commissioning source; during the Basic Officer Leader Course (BOLC); and at the first duty station. Then we can begin a new positive cycle where we access and retain more minority officers in the Infantry. This will raise the percentage of minority leaders competing for senior

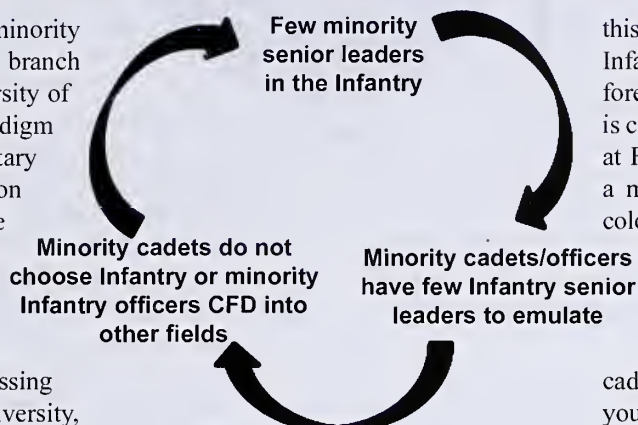


Figure 1

leadership positions. Then, minority cadets and junior officers have leaders of their race to emulate, more minority cadets choose Infantry, and the cycle continues.

At the Commission Source (Accession)

The two main reasons that minorities do not choose Infantry are:

- * They believe “you won’t get a fair shake in the Infantry;” and

- * There is a perception that being in the Infantry does not give you a marketable skill upon leaving the Army.

I believe that both of these reasons are myths, but almost every minority Infantryman I interviewed identified these two reasons as why minorities don’t choose the Infantry. It is imperative for minority cadets and candidates to overcome the stigma associated with being an Infantryman, and I think there are two ways to debunk these myths. First, we must ensure that our minority cadets are exposed to successful minority Infantrymen. Future officers from any commissioning source (U.S. Military Academy [USMA], ROTC, Officer Candidate School [OCS]) will imitate their leaders when it comes to branch selection. In 2010, nine black cadets from USMA chose Infantry as their branch. This was one of the highest numbers in recent years. I attribute

this to the fact that there were multiple black Infantrymen serving on the faculty at USMA foremost of which was COL Ron Clark, who is currently serving as a brigade commander at Fort Benning, Ga. When the cadets saw a minority Infantryman reach the rank of colonel and become a brigade commander, they could see firsthand that “you can get a fair shake in the Infantry.”

The second way to debunk these myths is to show our minority cadets that being an Infantryman teaches you to be a leader, and this is the primary marketable skill that civilian companies are looking for once they get out of the Army. We can use the draw of being a leader and decision maker to challenge them to choose the Infantry. We are looking for leaders who want this challenge in our branch. Sometimes all it takes is someone to encourage an enlisted Soldier or cadet and make them believe that they have what it takes to be an Infantryman. I met a minority cadet at USMA in 2006 at a football game. After talking with him for a short while, I saw he possessed great potential. I asked him what branch he was going to select, and Infantry was not one of his top choices. I spoke to him about being an Infantry officer and challenged him to consider it. I stayed in touch with him as a mentor, and I watched him choose Infantry, graduate Ranger School, deploy to combat, serve in the 75th Ranger Regiment, and take command at Fort Benning. As Infantrymen, we know that our trade takes a special leader, and when we spot a Soldier or cadet with the potential to be a member of our profession, we should point out the benefits (in the Army and post-Army) of being an Infantryman and encourage them to accept the challenge of joining our ranks.

Basic Officer Leader Course

For many minority officers, BOLC is an extreme culture shock. Many of my interviewees described feeling totally out

of place at BOLC. One officer spoke of feeling very lonely because he was away from home and was struggling to fit in at BOLC. "Everyone talked about hunting and fishing, and I had never even seen a deer!" Another officer I interviewed described being one of four African-Americans in a BOLC class of 80 lieutenants. He explained that coming from a historically black college or university (HBCU), everything was slightly different from what he knew. The humor was different. The topics of conversation were different. Faced with these differences, he stated how important it was for him to understand this new playing field and embrace it wholeheartedly. This attitude, along with a white battle buddy who guided him through some of the cultural differences, resulted in rapid acculturation and helped him become a very successful lieutenant. I would encourage the leadership at BOLC to keep an eye on our minority Infantrymen and help them in the process of fitting into a new environment.

First Duty Station

Figure 2 demonstrates the process that all junior leaders must go through to embrace the Profession of Arms and the Army Ethos as their own. Most lieutenants start in the outer ring, where they are motivated by seeking what is best for them. The move to the next ring can go one of two ways. If the officer falls among a bad group of peers, they will often adopt the faulty mind-set of the group. However, if a good group of peers embraces the officer, the leader will often adopt their positive traits. Finally, once the lieutenant reaches the center circle, they fully embrace the Profession of Arms and they adopt the Army Ethos as their own. At this point, they will strive for excellence in their profession by taking the hardest jobs and looking for a job that will challenge them. This diagram demonstrates how we need to develop our leaders (regardless of race) and guide them through these stages into the center circle.

For some officers, this diagram looks a little different (see Figure 3). There is an additional ring that some must overcome in their journey to embracing the Army Ethos in the center circle. For some minority officers this ring represents differences in culture or perspective. Many minority officers arrive in a unit and automatically feel isolated and feel like they can't be themselves because they look different and come from a different culture than the other officers. Although these differences may be subtle, if we address them we can help our minority officers adapt and ultimately thrive quicker. Minority lieutenants that are in our units will need different levels of coaching. The high performers will need slight adjustments to reach the center circle. Average performers may need more assistance and guidance in their journey to center circle. Finally, there are low performers who will have a hard time ever leaving the outer circle. However, as leaders we need to help them work through these differences and continue on a progression to embracing the Army Ethos in the center of the circle.

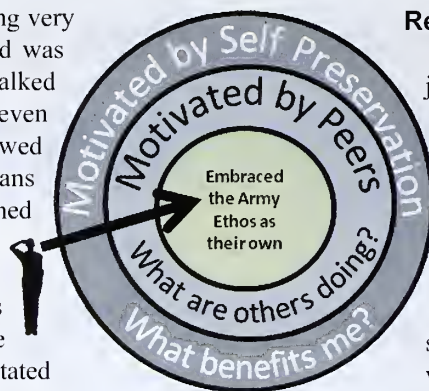


Figure 2^s

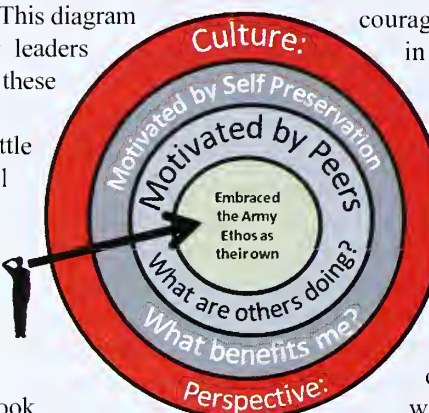


Figure 3^s

Recommendations

Here are five ways for leaders to help minority junior officers move through all the rings toward the center of the circle. You can apply these five principles to the leader development of any lieutenant. However, these principles are critically important for minority lieutenants because they will help them break the stereotype, thereby providing those lieutenants with an opportunity to succeed. Success will serve as an example for other minorities who will learn that there are great opportunities in the Infantry.

1) Address cultural and perspective issues with minority officers. Leaders must be open and frank when addressing a minority lieutenant who is struggling with assimilating with the Army culture. COL Reese Turner, a former artillery battalion commander, believes that many minority officers fail because they don't fully embrace the Army culture. It is our job to address cultural issues with our minority junior officers if they are struggling with this. However, many officers are hesitant to address differences in culture and perspective with their minority officers for fear of offending them. Or, when faced with an officer that is different from us, we choose to ignore them instead of addressing these problems with them. We must understand that the minority officer is often faced with the tough task of finding a stasis between their culture and Army cultural norms. This means staying true to themselves while understanding and integrating into the organization that they are a part of. As leaders we must guide and advise our minority officers through this process as they acculturate to the Army way of life. This will be a slow and deliberate process, but it begins with having the courage to address this potentially uncomfortable topic in the first place.

2) Be deliberate in integrating minority lieutenants with peers. This is important with any new lieutenant but especially important with minority lieutenants. Because of the lack of diversity in the Infantry, many minority lieutenants already feel isolated on the outside ring where they don't have a lot in common with other lieutenants and turn towards self-preservation and focusing on themselves. If they successfully integrate with a good group of lieutenants that accepts and ultimately challenges them, they can make the transition to the second ring very quickly. Another minority officer that I interviewed emphasized the importance of lieutenant team building in his growth as an officer and his embracing of the Army culture and ethos at his first unit. His battalion commander constantly kept the lieutenants together (PT, breakfast, officer calls, etc.). This officer accentuated the significance of this peer integration happening during the first one to three years of an officer's career to start him on the road to full integration with the Army culture.

3) Seek out and facilitate meetings between minority

officers and a mentor of like race. One of the biggest diversity issues in the Army is that our minority junior officers are looking at Army senior leaders (battalion command and above), and they do not see officers of their race. As leaders, we can help address this problem at our level by connecting our minority officers with mentors of the same race. These mentors can serve as a real-life example of someone of their race who has transitioned to the center circle and embraced the Army Ethos and culture as their own. The mentor can also provide advice and guidance to our minority officers from a like perspective. This is critical during BOLC. We have a great opportunity to gather our minority officers together early in their career and partner them with a mentor. This is not about nepotism. It is about a mentor describing the road to success in the Army from a like perspective. Once lieutenants arrive at a new unit, this process needs to continue. However, many of the minority officers that I interviewed mentioned that often there were no officers available for this relationship. Frequently, a minority senior NCO filled this role. We need to encourage these relationships for our minority lieutenants.

4) Use education and experiences to help the officer transition to the center circle. Minority officers that have grown up in a culture different from the Army may need certain types of education and experiences to help them on their journey to the center circle. MAJ Kevin Jackson, a former brigade S3, gave a great example. When he was a lieutenant, many of his peers (who went to USMA or came from a military family) would discuss military history. Jackson, who was not raised in a culture that embraced the military, felt left out during these discussions. So, he began studying military history on his own time. In doing this, he took a vital step in embracing the Army culture. This process is going to be different for every officer, but as leaders, we need to help minority officers in this process by doing the following:

- * Understand the strengths and weaknesses of our junior leaders;
- * Identify the educational opportunities and the experiences that will challenge and mold them; and
- * Offer them these opportunities and experiences.

5) Be fair. As an Infantry commander, being fair starts with being cognizant of the challenges that some of our minority officers are facing and being aware of our own pre-conceived notions. Many of the officers that I interviewed shared that at their first unit they just felt out of place and could not be themselves. Others talked about the tremendous burden to succeed that they felt from their communities at home or other members of their race. These feelings often resulted in a “zero-defect” mentality that isolated them even more. We must be cognizant of the backgrounds, beliefs, and approaches of all our subordinates in order to be effective leaders for them. Being fair also consists of being deliberate when it comes to diversity. COL Turner spoke of always sitting with different lieutenants in the mess hall and splitting up teams differently during officer sports/events. These small things go a long way in being fair and building an appreciation for diversity in a unit. Another officer encouraged commanders to challenge themselves with the question “If I am giving a punishment or reward to a minority, would I do the

We must be cognizant of the backgrounds, beliefs, and approaches of all our subordinates in order to be effective leaders for them.

same to a non-minority?” These are all part of building a unit with equity and fairness among the officers.

Conclusion

Professional military education (PME) would be a great place to introduce and

discuss the idea of diversity in the Infantry officer corps. Starting with Infantry BOLC, continuing at the Maneuver Captains Career Course, and especially during the pre-command courses, we should challenge our leaders to work on promoting diversity in their units. PME serves as a time for leaders to reflect and think, and I think if we begin to discuss diversity in the Infantry during PME, our junior leaders will come up with creative solutions to promote diversity in our branch.

Fixing diversity in the Infantry will not be quick. It will take a generation of officers to change the cycle, but we have to start now. We need to provide a positive exposure to the Infantry for our minority cadets and OCS candidates. We need to be deliberate about integrating our minority lieutenants during BOLC. We need to use all five steps mentioned above to help minority officers assimilate and acculturate quickly when they arrive at their first unit. Finally, we need to add a discussion on diversity to the program of instruction during PME. If we start to take these steps, we can start to reverse the current trends and ensure our branch and the Army represents the diversity of our nation for the future.

Notes

¹ “From Representation to Inclusion: Diversity Leadership for the 21st Century Military” (Executive Summary); page 7; 15 March 2011.

² According to the Army Diversity Roadmap Briefing, minority children will be the majority by 2025.

³ Percentages taken from 2010 U.S. Census (www.2010.census.gov/2010census/); Officer data/percentages taken from the Total Officer Personnel Management Information System and U.S. Army Demographics FY 10 Army Profile (based on numbers provided by the Army and the Defense Manpower Data Center)

	U.S. Population	Army (Officer)	Infantry Officer	Infantry BN CMD (Current or Designated)
White	64%	72%	82%	87%
Black	13%	13%	5%	5%
Hispanic	16%	6%	5%	3%
Asian	5%	2%	4%	3%
Other	3%	10%	2%	2%

⁴ COL Nate Allen and COL Tony Burgess developed this diagram. I first saw it during a leadership professional development with COL Allen at Fort Drum, N.Y., in 2003. I have modified the diagram slightly over the years to fit some of my ideas about leadership.

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A Soldier with the 2nd Battalion, 4th Infantry Regiment calls for support while other Soldiers pull security during a patrol in the Wardak Province of Afghanistan on 4 April 2011.

Photo by SPC Andy Barrera

INFORMATION DISCIPLINE AND MISSION COMMAND

CPT JUSTIN LYNCH

During my career in the Army, I have served at the platoon, company, and battalion levels. At each level, I observed or participated in a different style of communication with higher and lower echelons. As a platoon leader, I communicated with my company command post (CP) and occasionally with my battalion tactical operations center (TOC). As a company executive officer (XO), I worked regularly with both my platoons and our battalion headquarters. And as a battalion battle captain, I interacted with the platoons and companies of my unit, my sister battalions, and the brigade TOC. The higher the echelon I worked with, the more I observed leaders' need for real-time knowledge of what was taking place on the ground and the challenge ground commanders faced in keeping their commanders informed. This demand for more information could become a distracter unless we can find a way to prioritize and expedite the flow of information at the company and platoon levels.

I believe the primary impetus for this sense of urgency was the profusion of mission command and information systems available at each level. Each echelon owned and controlled progressively more information assets, acclimatizing leaders to larger amounts

of information whenever they wanted it. Their heightened expectations for knowledge reduced their comfort with making decisions without exhaustive information. Because of these expectations, leaders at battalion and brigade rarely practiced what I will refer to as information discipline. Information discipline is simply a willingness to wait for information to develop and be more accurately reported instead of rushing into a decision or immediately demanding non-time sensitive information from subordinate units. This lack of information discipline can be detrimental to mission success.

As a platoon leader, I was fortunate to have company leadership and a company CP that did not constantly ask for updates from ground commanders unless it was necessary or unless they were going to provide support based on the information we produced. Even then, the CP understood that ground commanders were often so busy that answering a request for information (RFI) from the battalion TOC or company CP ended up being a lower priority than dealing with an immediate problem. My company CP also had very few reconnaissance and surveillance assets, which further impaired and slowed collection of data wanted by the CP.

The Soldiers in our CP gathered information by radio or Blue Force Tracker (BFT) communication with ground commanders and occasionally with thermal imaging systems. They did not use unmanned aerial systems (UAS) or any of the many other assets now commonly provided at the company and battalion level because these were simply not available at the time. I believe their limited access forced the commander to be comfortable making decisions with relatively small amounts of information, leading to very effective mission command.

The decision-making comfort and discipline I observed as a platoon leader may not be the norm in battalion- and brigade-level TOCs. I have discussed this issue with current or former company commanders or platoon leaders who served in almost every division in the Army. Nearly all of them have experienced or observed a higher headquarters demanding sensitive information when gathering and submitting information of the quality and volume expected was at best difficult and at worst virtually impossible. Battalion TOCs often require constant updates, particularly when they have troops in contact (TIC). Short-staffed company CPs spend a lot of effort keeping their battalions informed, despite the fact that almost every decision made about engagements is made at the company or platoon level, leaving company CPs and platoon leaders to struggle to keep their higher headquarters informed, even when they truly have little substantive information to pass along compared to the amount of effort spent. The nearly universal outcome has been a reduction in the effectiveness of mission command and an increase in friction for Soldiers on the ground.

Battalion TOCs also do not function as effectively as possible when leaders do not practice information discipline. While information is critical during an engagement and a battalion or brigade TOC's function is to manage that information, this task can become such a high priority that Soldiers in the TOC neglect their other duties such as asset management. We need to train leaders to better prioritize the sensitivity and urgency levels of information demanded of subordinate units. At the company and platoon levels, leaders who do not do this either spend a large amount of time answering RFIs that do not contribute to their (or anyone else's) operational success or are constantly distracted, causing friction at their level when they should be trying to solve problems. Within reason, leaders should be more concerned with leading their subordinates than answering questions from someone in a TOC whose decision or RFI will not be impaired by a five-minute delay.

This rush to answer questions also contributes to inaccuracy of initial reports. Sometimes poor reporting is a result of poor training at the platoon and company levels, but there are other contributing factors. Engagements are typically confusing. Comprehending the situation can take minutes, especially if a leader's vehicle is damaged, the ground commander does not have line of sight with his element in contact, or if the enemy attacks from multiple positions. If platoon leaders and company commanders have to respond to a barrage of questions immediately after reporting contact, it is unlikely they know what is happening well enough to provide accurate reports.

Having readily available but sketchy — and hence inaccurate — information also rarely contributes to better decision making at the higher echelons. Platoons and companies make most important decisions in today's engagements, and decisions made at the

battalion level are rarely time sensitive. If a unit needs a medical evacuation (MEDEVAC), indirect fire support, air assets, or quick reaction force (QRF) commitment, they will almost always decide that at the ground level. While the approval mechanisms for some assets are not at the ground level, such as certain types of fire support that require approval above the company level and other requests processed through battalion TOCs, ground commanders make the decision to request them.

The solution to the information management problem is not complicated and should be easy to implement. Companies, battalions, and brigades should have published standard operating procedures (SOPs) detailing timelines for submitting certain information during an engagement and should not deviate from SOP without good reason. Companies and battalions can nest their SOPs inside the brigade's SOP, creating a smoother flow of information from ground commanders to at least the brigade level. Most TOCs and CPs post the commander's critical intelligence requirements, so putting this SOP where both Soldiers in the TOC and leaders have easy access is both feasible and effective. For instance, an initial report should include a general description of the type of contact, if the ground unit is still in contact, and if it has any known casualties. By three minutes after the initial report, ground commanders should report a general situation report, a more detailed contact report, an initial damage assessment, and an update on casualties. Requests for resources can come throughout as soon as ground commanders confirm their need. If leaders at the battalion level quickly develop additional RFIs, they should consolidate their requests and send them to the company CP together instead of contacting the CP constantly and preventing Soldiers in the CP from performing their own duties. If reporting is an issue, it should be addressed during an after action review, and reporting training should be mandated. A TIC is not an effective time to fix a subordinate leader.

Before questioning an actively engaged subordinate unit, leaders need to assess their RFIs and ask how important it is for a decision they will be making at their level. If the information is time sensitive, such as something relating to fire support approval or a MEDEVAC, an RFI should immediately be addressed to the subordinate unit and be answered quickly. If the RFI can wait or is primarily intended simply to inform a leader, as opposed to enabling a decision, then leaders need to allow their platoon- and company-level leaders to manage their engagements with minimal interference.

In conclusion, contact with the enemy will always be a high-stress proposition, and more will be demanded of the small-unit commander than at any time in his career. That commander cannot lose sight of the fact that if his unit needs a medical evacuation (MEDEVAC), indirect fire support, air assets, or commitment of a reserve or other resources, the best way to expedite that is to provide his own commander with the information that will let him most efficiently allocate and commit assets.

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TEACHING INSURGENCY THROUGH THE PRISM OF THE AMERICAN REVOLUTION

CPT DARRELL E. FAWLEY III

After the President announced a shift from ground wars to a strategy focusing on air-sea battle, many are probably breathing a sigh of relief, happy to be done with the frustrating police action inherent in counterinsurgency (COIN) operations. However, a simple analysis of history and the current state of the world should lead most to believe that the U.S. Army's need to understand low intensity conflict and stability operations is far from gone. Beginning in the earliest days of the 20th century, the Army has found itself in a COIN environment several times only to later forget those lessons and prepare for the next big war. As the Army's role winds down in Afghanistan and in the wake of the end of operations in Iraq, most Infantry officers are happy to turn back to high intensity offensive and, to a

lesser degree, defensive operations, which are often mischaracterized as full spectrum operations (these operations are in fact the highest end of the spectrum but not the spectrum in itself). However, COIN will be a necessary skill for the foreseeable future, and it should remain a focal point of our professional education and development for years to come.

By teaching NCOs and officers counterinsurgency in the interwar period, we ensure that we are prepared the next time the nation asks us to counter an insurgency instead of being caught off guard as in the Philippines, Vietnam, and Iraq to name a few. Further, when our Infantry leaders understand insurgency, they will better understand how to fight it. They will not make the usual mistake of

seeing their enemies as cowards, idiots, or thugs. They will understand what motivates their enemy, what makes him strong, and where he is vulnerable. They will be able to develop an effective plan to defeat him and deny him the populace. And they will do this much faster than has been done in wars past where needless lives, resources, and time were wasted fighting the wrong fight.

The Army has no shortage of lessons learned and examples of COIN operations. However, the problem will be that as new officers and NCOs rise, those who have never found themselves in that environment will not have the same point of reference. They will not have a historical

A copy of a print by John Baker, 1832, depicts the Battle of Lexington, 19 April 1775.

Artwork from the George Washington Bicentennial Commission, National Archives



understanding of low intensity wars. Their understanding of Vietnam is likely to be more from the point of the culture of the times, the larger politics, the draft, and the mental effect on the veterans. The trick to getting them to learn about insurgency, which they must get before learning how to counter it, is to use historic examples that they already understand. The American War of Independence provides the perfect vehicle for this. Nearly all officers and NCOs will understand it, and it should interest them to learn that their own nation was born from that dreaded thing called an insurgency. This article will provide an outline for how to teach concepts from FM 3-24, *Counterinsurgency*, and FM 3-24.2, *Tactics in Counterinsurgency*, to leaders of all backgrounds using the most common point of reference.

Historical Background

1763 — Britain determines that the Colonies should pay for their own defense thus beginning a series of unpopular taxation. Also, the Royal Proclamation of 1763 prevented settlement west of the Appalachian Mountains.

1765 — The Quartering Act is enacted forcing civilians to quarter troops against their will, and the Sons of Liberty political organization forms.

1770 — The Boston Massacre occurs.

1772 — The Gaspée Affair occurs (angry locals board, loot, and torch a British trade enforcement ship).

1773 — The Boston Tea Party occurs.

1774 — The Massachusetts Government Act leads the Colonialists to expel the British-appointed government and storm British army forts. Provincial congresses spring up, and Massachusetts establishes a defense network.

1775 — British General Thomas Gage (the appointed Massachusetts governor) sends regulars toward Concord to seize arms and arrest revolutionaries. Fighting breaks out in Lexington on the morning of 19 April 1775.

What Makes the American Revolution an Insurgency?

As defined by FM 3-24, an insurgency is “an organizational movement aimed at the overthrow of a constituted government through the use of subversion and armed conflict or a movement to change the political structure of an existing government or remove a ruling party for reasons such as politics, ideology or religion.” The American Revolution was a political and armed struggle to expel the imposed government of the monarch (legitimate government) and establish a new political order (popular sovereignty).

Prerequisites of an Insurgency That Existed Prior to the American Revolution

The following prerequisites as listed in FM 3-24 existed at the beginning of the American Revolution:

A cause that can be tactically manipulated — The two main causes were the will for popular sovereignty and the belief in manifest destiny (though the term is anachronistic as it wasn’t used in popular media until the 19th century). In some areas such as Boston, the terrible economy also contributed.

A population that is vulnerable to rhetoric or disaffected and willing to revolt — Great orators such as Patrick Henry and writers

such as Thomas Paine fanned the flames of revolution, and many Colonialists detested the presence of British soldiers on American soil.

A strong leader who can mobilize the masses — Despite popular perception, the American Revolution had no central leader (not even George Washington). However, at the local and regional levels, many filled this role.

Weakness of the counterinsurgent — British weaknesses included extended lines of communication (the ocean being one), large areas to administer, and an inability to enforce settlement laws.

Crisis for the counterinsurgent — Britain had fought in several wars in recent decades and would soon be embroiled in one of the first global wars.

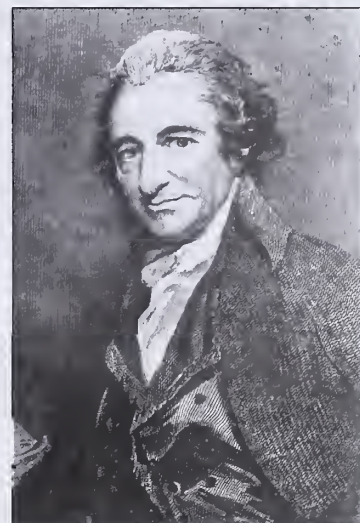
Geographic conditions — The Atlantic Ocean created issues for troop movement. The elongated nature of the Colonies at the time created at least three distinguishable theaters — north, south, and west. Winters limited campaign action.

Another prerequisite — **outside support** — would happen after the start. The revolutionaries received political support in the form of recognition by France and military support in the likes of Baron von Stueben and the Marquis de Lafayette for training. Later, France, Russia, Spain, and Holland would declare war on Britain, and the revolutionaries would receive financial support from France, Spain, and Holland in the form of loans. The only prerequisite not directly met — **weak borders** — was mostly because the British had political rights to the United States and Canada and didn’t really have qualms about crossing into Florida.

Root Causes of the Insurgency

According to FM 3-24, there are five root causes for an insurgency: **occupation and exploitation, identity, corruption or repression, religion** (particularly fundamentalism and extremism), and **economic failure**. Neither religion nor economic failure were major factors (though the economy played a huge role in Massachusetts), but the other three were. Not all causes have to exist or currently be an issue; as long as the issue is perceived, it can be exploited.

At the time of the first battles, there was a true military occupation of the Colonies and a combination of real and perceived economic and political exploitation. In terms of identity, there was no true American identity at the time (to be honest, Americans truly became Americans through the Civil War). Many people saw themselves as a member of their colony and not a subject of the British monarch. In Massachusetts, where the Revolution ignited, the Massachusetts Government Act led to repression of popular sovereignty (and then to revolt).



Thomas Paine wrote Common Sense, a pamphlet which advocated for Colonial America's independence.

What Type of Insurgents Were the Revolutionaries?

There are eight types of insurgents as recognized by FM 3-24. They are: **anarchists** (seek end of all government), **egalitarians** (seek equitable distribution of resources and radical social reform), **traditionalists** (seek to return to a “Golden Age” or religion-based system), **pluralists** (seek to establish liberal democracies), **secessionists** (seek independence or to join a different state), **reformists** (seek equitable distribution of political and economic power), **preservationists** (seek to prevent changes or reforms), and **commercialists** (seek economic gain). Undoubtedly, the majority of revolutionaries were pluralists and secessionists in that the main goals of the revolution were to have a government by the people and a clean split from Britain. It is worth noting that while most secessionists were also pluralists, not all pluralists were secessionists. Especially in the early period of the Revolution, not everyone wanted to split from Britain so long as they could rule themselves. (It is further worth noting that not all Americans, not even a great majority, were revolutionaries. Many were fence-sitters or British loyalists.) On a smaller scale, revolutionaries also exhibited the traits of reformists, preservationists, and commercialists.

Pathway to Insurgency

In his book *Counterinsurgency Warfare: Theory and Practice*, David Galula described the “Orthodox Pattern” of insurgency in steps. They are:

Step 1: Creation of a Party — Though there was no single party prior to Lexington and Concord, the Sons of Liberty and Committees of Correspondence came into being. These were political organizations that fanned the flames of revolution.

Step 2: United Front — In the aftermath of the Massachusetts Government Act, the people stormed British forts and took control of them. They then set up a defense network and warning system (known in popular myth as Paul Revere’s Ride) preparing for the inevitable counterattack by the British.

Step 3: Guerilla Warfare — The British left Lexington on 19 April en route to their objective (Concord) where they intended to arrest high-ranking revolutionaries. On their way, they were ambushed along the roads by irregular forces that came together

to defend their home. Later, the British would face guerilla war in the southern and western theaters.

Step 4: Movement Warfare — The establishment of the Continental Army and most of the action in the north represents movement warfare.

Step 5: Annihilation Campaign — Here Galula is partially wrong. Insurgencies are wars of attrition versus annihilation (unless the target is popular will). After the British surrender at Yorktown, Washington pressed on with the war for more than a year until the will of the British had been destroyed.

FM 3-24 takes a more streamlined approach to insurgency, putting it in three phases:

Phase I – Latent and Incipient

Phase II – Guerilla Warfare

Phase III – War of Movement

Mao Tse-Tung probably describes the steps of insurgency best. His phases are:

Phase I — Organization and preservation

Phase II — Progressive expansion

Phase III — Decision or the destruction of the enemy.

(Galula also describes what he calls the shortcut as the Bourgeois-Nationalist Pattern that contains two phases: blind terrorism followed by selective terrorism.)

Dynamics of an Insurgency

FM 3-24.2 lists eight dynamics of an insurgency. They are: **leadership, objectives, ideology, environment and geography, external support, internal support, phasing and timing, and organizational and operational patterns**. The American Revolution contained all of these. Below is a discussion of the major dynamics of the American Revolution.

Leadership — Leadership breaks down into leadership structure and leadership methods. Leadership structure comes in three forms: single person, single group or party, and group of groups. Despite the popular perception that Washington was the leader of the Revolution, he was only the leader of the Army and even then could only really control the Army in the north. Politically, the revolutionaries employed the single group or party leadership structure with the Second Continental Congress. However, each colony maintained its own government. Militarily, the U.S. employed the group of groups method with the U.S. Army, U.S. Marines, local militias, and other forces such as Francis Marion’s Raiders. In terms of leadership methods, an insurgency is either centralized or decentralized. The U.S. used a centralized (Continental Congress) method for the insurgency. Even though the military was in certain aspects decentralized, it is important to remember that insurgency is fueled by politics, not arms.

Objective — Objectives, as most in the military know, are categorized into strategic, operational, and tactical categories. At the operational and tactical levels, these further break down into political, military, economic, and social objectives. Certain strategic objectives of the revolutionaries were to overthrow the established government (in a sense, however, they were not attempting to dethrone the king, just his grip on America); cause the withdrawal of the British occupiers; and in the early part, extract political concession. The last was dropped when it became clear that independence was the only option. Operational goals came



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“First Blow for Liberty” depicts the Battle of Lexington, April 1775.

in the form of attacking the government's legitimacy (political), forcing British units out of certain areas (military), causing the population to question the government (social), and establishing mass communication (social). At the operational and tactical levels, economic objectives were never as important as the other three types. Property damage was not condoned by most Americans, and when soldiers foraged, it hurt rather than helped their cause. Tactically, objectives included intimidation of loyalists and swaying opinion through propaganda (political), disruption of the enemy through ambushes and surprise attacks (military), and communication with the populace through written and spoken means (social).

Ideology — There are three forms of ideology widely used in insurgencies: narrative, communism, and religious extremism. During the days of the American Revolution, communism did not exist (at least as we know it), and religious extremism did not play a significant role, if it even played an insignificant role. However, the revolutionaries employed the ideology of a popular narrative quite adeptly. The narrative was that the United States were (it was not until after the Civil War that the United States became singular) a group of states governed by the people, and that the people had always governed themselves so it was time to expel the foreign occupiers. Added to this narrative was the fear of a standing army and hatred of powerful businesses such as the British East India Company. (Today, al Qaeda and the Taliban both employ the narrative of a golden age of Islam and the reestablishment of the Caliphate in the face of foreign invaders who want to pervert their pious way of life.) Here, I'd ask you to read the Declaration of Independence. Being that it had no legal value, it was more likely meant to encourage the American people in the struggle against the British. Was it a narrative, propaganda, or both?

External Support — External support comes mainly in four categories: moral, political, resource, and sanctuary. The United States received moral support from most European nations. The nations hated the British empire, and many had fought it at some point and so celebrated the American struggle not so much out

In an insurgency, the government and insurgents fight over the support of the populace. Never will either side have the total population. The American Revolution is no different. An overwhelming number of Americans remained neutral or loyal to the British.

of ideology as out of a common enemy. Politically, France, Spain, Holland, and Russia would eventually embroil Britain in a global war fought in several fronts across the globe. The United States received resource support from France in terms of military supplies, and a few countries provided loans to help the fledgling confederacy of states. The United States did not receive sanctuary support or even need it, but there was sanctuary beyond the Appalachian Mountains.

Internal Support — Internal support comes in three forms:

- *Popular Support.* This comes in both active and passive means. During the Revolution, people were recruited through persuasion, reaction to abuses (perceived and real), foreign support (training and legitimacy), and apolitical motivations (largely money). Undoubtedly, coercion played a role in recruitment though popular myth would tell us that everyone came willingly to the cause of freedom. In an insurgency, the government and insurgents fight over the support of the populace. Never will either side have the total population. The American Revolution is no different. An overwhelming number of Americans remained neutral or loyal to the British. Both the U.S. and Britain fought over the populace and used various means of recruitment or dissuasion, some civilized and others not. The British attempted to leverage and free slaves with varying degrees of success. The U.S. did as well to an extent but obviously had a much tougher time.

- *Logistical Support.* This comes in the form of supplies, weapons, ammunition, and money. States provided much of the material, some soldiers lived off the land, and Washington even sanctioned foraging during the winter. Many soldiers provided their own arms and clothing.

- *Insurgent Bases.* Insurgents typically

require safe houses, guerilla base camps, and insurgent training camps. The revolutionaries are known to have quartered in safe houses and definitely had camps at Valley Forge and Morristown among others. Training occurred in several areas, most notably the famous (if over exaggerated) winter of 1777 at Valley Forge.

Tactics of Insurgency

Insurgents may employ one or a combination of a diverse range of tactics. Terrorism and guerilla warfare are often incorrectly regarded as insurgency. While insurgents employ these tactics, not all terrorists or guerillas are insurgents and not all insurgents are terrorists or guerillas. The most common insurgent tactics are guerilla warfare, terrorism, conventional tactics, criminal activity, subversion, and propaganda.

Guerilla Warfare — Guerilla warfare is typically defined as irregular tactics such as hit and run, limited objective, and surprise attacks. Most notably the likes of Francis Marion employed this tactic. It was much more widespread in the southern theater but was first used on the road to Concord on 19 April 1775.

Terrorism — Galula described blind and selective terrorism. Blind terrorism was where victims were chosen at random or for the fear factor whereas selective terrorism targets loyalist and government officials. Some militia leaders (on both sides) were known to use fear such as prisoner torture, hangings, etc., but terrorism in the more contemporary sense was not used.

Conventional tactics — The war in the north almost exclusively saw conventional tactics in the popular image of Washington commanding the Continental Army. These tactics were widely used in the south but in combination with guerilla warfare.

Criminal activity — Criminal acts were not employed during the war in a tactical sense as property confiscation or destruction was never celebrated by the masses, not even the Boston Tea Party.

Subversion — Political subversion was not widely used because after the popular revolt in Massachusetts in 1774, the legitimate government (British-appointed) had largely been thrown out and replaced.

Propaganda — Despite a popular

perception that all Americans fought for independence, there were a large number of fence-sitters and loyalists who needed to be influenced in the minds of the revolutionaries. The largest form of propaganda was through newspaper and pamphlet circulation. A great example of propaganda use by the revolutionaries is the case of Jane McCrea. She was the fiancée of a loyalist who was supposedly murdered by two Indians and scalped. Years later, the true circumstances of her death were still unknown even after the exhumation of her body, but revolutionaries used it against the British. The incident showed both Britain's inability to protect the populace and brutality since the British were allied with the local Indians. The incident became a key factor in resistance of General Burgoyne prior to the Battle of Saratoga (the Americans won the battle, leading the French to declare war on Britain).

American Strengths and Vulnerabilities

The revolutionaries demonstrated historical strengths and vulnerabilities of insurgents.

American Strengths:

Indigenous nature and knowledge — The Americans knew the land, the people, and the weather. They understood the customs and local issues and had at least some local support. They blended in better and could move more easily and swiftly.

Intel operations — It was much easier to form intelligence networks for the Americans than the British.

Motivation — The Americans were fighting for their independence against an army fighting thousands of miles from home.

Focused responsibility — The Americans only had to administer to the 13 Colonies and fight the war. Britain had to administer to the home front and its vast empire as well as fight the war.

Insurgent tactics — Guerilla warfare is always easier to execute as an insurgent, and insurgents have a wide range of options unavailable to the counterinsurgent for both political and practical reasons. American revolutionaries were no different.

Enduring hardships — Americans could endure more hardships because they were fighting for their own independence.

Further, many of the fighters were from agrarian backgrounds where they were raised to be tough in the face of a harsh life.

Vulnerabilities:

Limited personnel — Recruitment was always a problem for the Army. States were first given quotas and then resorted to a draft. Despite many wanting independence, soldiering was most often left to vagrants, the poor, and the politically and economically unimportant. Washington sent many concerned letters to Congress regarding poor recruitment and retention problems.

Limited resources — The U.S. had a worthless currency, and the Army could not provide food during many of the winters. Weapons were at a premium. It wasn't until France's involvement that this improved.

Combat power — The Americans lacked a navy of any real standing and could not bring as many cannon and mortars to the fight as the British.

Individual factors — Desertion was high in the Army due to the harsh conditions and fear of combat. British propaganda and fear of torture were among other factors that hurt recruitment and retention.

Popular support — The revolutionaries relied on the populace for aid. Many times they did not get enough and had to resort to foraging and stealing. This became so bad that some farmers refused to plant crops so they wouldn't be stolen.

Operational factors — Lack of technology and inability to efficiently communicate across the theaters were among operational vulnerabilities of the Americans.

Conclusion

None of the concepts I've discussed are revolutionary. Nearly all the principles are explained in either FM 3-24 or FM 3-24.2. However, it is absolutely important that our next generation of Infantry leaders understands insurgency and COIN because they are likely to find themselves fighting an insurgency or in an environment similar to COIN. Using the American Revolution will not make these future leaders experts at what an insurgency does, but it will allow them an easy way to identify the main components of an insurgency with knowledge they already have. It will also facilitate further study and allow them to seek parallels when studying other insurgencies across history. It is critical that we do not repeat the same mistakes of past generations and dump COIN from our memory because we all want to believe that it was our last turn at it. Using our own revolution as a basis, we can prepare our future leaders for more in depth study and a greater understanding of irregular warfare, the most common form of war over the past 200 years.

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General Burgoyne surrenders at Saratoga in October 1777.

National Archives - John Trumbull painting

A CURRENT ASSESSMENT OF EXCALIBUR EMPLOYMENT IN AFGHANISTAN

COL GENE MEREDITH, MAJ DAVID MOSER, CPT ANDREW ZIKOWITZ, AND DANIEL HALLAGIN

A Soldier with C Company 3rd Battalion 321st Field Artillery Regiment, pulls the lanyard on the M777A2 during the first firing of the Army's new GPS-guided Excalibur round in Afghanistan on 25 February 2008.

Photo by SPC Henry Selzer

In November 2011, I had the opportunity to lead a four-man assessment team from the Fires Center of Excellence (FCoE) at Fort Sill, Okla., exploring the operational employment of the 155mm Excalibur and other precision munitions in Afghanistan. One of our objectives was to determine why U.S. Army forces were employing a limited number of Excalibur projectiles in Afghanistan. As we conducted our survey, we quickly realized there were multiple reasons for the limited number of Excalibur projectiles being fired, and this was a symptom of a much larger issue with indirect fires (IDF) as a whole. We organized these reasons into seven focus areas:

1. Combined joint task force (CJTF)/regional command (RC) fire support element (FSE) capability;
2. Combined arms Excalibur live-fire training;
3. Fire support team (FIST) collective training;
4. Employment, institutional and Field Artillery (FA) schools training;
5. Close air support (CAS) employment;
6. Firing unit capabilities; and
7. Airspace management.



Although Excalibur usage can and should be increased due to its accuracy, we also recognize this munition, like all others, has its strengths and weaknesses. Excalibur is neither the Field Artillery's nor the maneuver commander's precision weapon panacea; rather it is one of a select group of precision or near-precision munitions available. Therefore, the focus areas we identified are not necessarily exclusive to Excalibur employment but can be applied to most IDF.

FA Organization for Combat

To discuss the current Excalibur employment, it is necessary to understand how U.S. Army FA is employed and organized for combat in Afghanistan. The majority of deployed firing units are organized in the same way, employing two gun platoons of M777A2s, M198s, or M119s. RC-East consists of eight brigades, of which five resemble standard U.S. Army brigade combat teams (BCTs). Of these five BCTs, only four have deployed their organic fires battalions. RC-South consists of five brigades, of which three resemble standard U.S. Army BCTs. RC-South has only one fires battalion that provides IDF for the entire RC. Due to the size of the battlespace in both RC-East and RC-South, there are not enough fires battalions to ensure FA coverage for all maneuver forces, much less coverage by a weapon system that can deliver Excalibur.

CJTF/RC FSE capability. One of the most detrimental aspects to surface-to-surface IDF employment and FSE capability has been the loss of the division artillery (DIVARTY) and/or the lack of a deployed force field artillery (FFA) headquarters (HQ). There is no O6-level (colonel) command authority at the CJTF/division level to enforce standardization and certification; share IDF tactics, techniques, and procedures (TTPs); much less advocate for Excalibur or other surface-to-surface IDF. Although the division increased the FSEs personnel authorized strength to offset the loss of DIVARTY, it was not sufficient to allow them to perform the same functions as the 150-personnel DIVARTY staff or FFA HQ. Couple this with some of the division FSEs personnel shortages and it is easy to see why there has been a degradation of surface-to-surface IDF employment, as a whole, with the second order effect of limited precision munitions employment. Without a deployed FFA HQ, fires battalions assigned to BCTs are forced to accept additional responsibilities that would otherwise be considered the duties of the FFA HQ. The lack of FFA HQ and diminished capability of the CJTF/division FSEs places the onus of Excalibur employment on fires battalion commanders and junior fire support personnel.

To better influence the IDF fight, a fires brigade (FiB) or a FiB HQs, at a minimum, should deploy with each division headquarters to provide FFA functions and fires experience and expertise for the CJTF. If that is not possible, a post brigade commander with a staff designed to execute FFA functions should deploy with the CJTF. CJTF/division fire support coordinators (FSCOORDs) and FSEs should be manned at authorized modified table of organization and equipment (MTOE) levels with the commensurate level of expertise required to perform their mission.

Combined arms Excalibur live-fire training. Combined arms Excalibur live-fire training at home station and/or at the Army's combat training centers (CTCs) is inadequate for units preparing to

deploy. In many cases, Excalibur capabilities are misunderstood by maneuver commanders and fire support teams alike. The first time many units live-fire an Excalibur round is in Afghanistan. This is primarily due to the fact they cannot fire Excalibur at home station and/or during their pre-deployment training at the Joint Readiness Training Center (JRTC), Fort Polk, La. Units with pre-deployment training opportunities at the National Training Center (NTC), Fort Irwin, Calif., do not fare much better since they are limited to only one live-fire round if it functions properly. Additionally, the CTC training is often focused on the target packet and concept of the operations (CONOP) process, opposed to the conditions they will face in Afghanistan. CTC Excalibur training does not offer experience in solving problem sets that deployed units encounter, such as airspace coordination, tactical employment, collateral damage estimate (CDE) concerns, ballistic impact point (BIP) consideration, target location, and the mensuration of 10-digit grids. Due to this limited exposure and incomplete training, units do not understand Excalibur employment TTPs. In addition to this situation at the CTCs, when units deploy to Afghanistan, Excalibur live-fire training is not conducted frequently. Not unlike the missions fired at the CTCs, rounds fired down range seem to degrade some maneuver commanders and fire supporter's opinions of Excalibur, rather than gain their confidence. In the relatively small sampling of training rounds fired in Afghanistan, any resulting 'fail-to-function' or 'precise miss' skews the perception of the munition's actual dependability.

To facilitate better understanding among fire support personnel and maneuver commanders alike, the Excalibur round must be fired during home station live-fire training. The Excalibur project manager needs to support this requirement by immediately implementing a technical solution to reduce the size of the surface danger zone. **CTC Excalibur training should be scenario driven, to include procedures and battle drills required to accurately locate the target, clear airspace, synchronization and cross talk between fire support officers (FSOs) and fire direction centers (FDCs) to produce a BIP plan integrated with pre-planned airspace coordination measures (ACM).** Units should shoot Excalibur early and often during their rotation, demonstrating to maneuver commanders Excalibur's effectiveness, as well as training the entire fire support team.

FIST collective training/employment. Collective FIST training is currently not adequate to support more frequent use of Excalibur. As a consequence of modularity, many FISTs do not conduct pre-deployment training with the fires units they will serve with in Afghanistan. Fire support teams further decrease their ability to employ surface-to-surface IDF by training for nonstandard missions at the expense of their core competencies. Acknowledging this is not a new concern, the impact is even more apparent when trying to employ a complex munition, such as Excalibur. Precision capability was further degraded when units did not train using the required digital equipment accurately employing precision munitions. Additionally, FISTs often do not carry the required equipment to obtain the 10-digit grid required for precision fires because they are carrying the additional equipment necessary and required by their patrolling units.

Commanders are increasingly relying on intelligence,

surveillance, and reconnaissance (ISR) assets to provide observation for fires. Assets that provide real-time or near real-time feeds to tactical operations center are preferred over dismounted observers due to their ability to aid in CDE decisions. Providing target grids, which can be mensurated with precision strike suite for special operations forces (PSS-SOF), with ISR assets designed for force protection is an effective practice. However, it removes the ground-based observer from the situation and further erodes the maneuver commander's confidence in the observer to do his job.

Continuing support for the current force design update (FDU), which aligns FIST training and oversight with the fires battalion commander, will correct a great deal of the noted training inadequacies. The FCoE needs to promote the importance of the fire supporter's priorities through continued discussion with the Maneuver Center of Excellence (MCoE). The FCoE needs to refocus FA junior officer development on fire support tasks to produce surface-to-surface fires experts. Most importantly, FIST personnel at all levels need to be proponents for fire support expertise by training and certifying their subordinates in their primary mission of the employment of all IDF.

Institutional training. Many of the senior leaders in Afghanistan are concerned junior officers and senior fire support NCOs do not graduate from the U.S. Army Field Artillery School at Fort Sill with a thorough understanding of Excalibur TTPs. They are also concerned that these Soldiers and officers have no experience on digital systems required for precision fires. As a result, units deliver pre-deployment Excalibur training to fires battalion key leadership and generally fail to include maneuver leaders and fire supporters. The result is a failure to adequately educate commanders on the training requirements for enabling and sustaining the capability to exploit Excalibur's precision.

We recognize recent updates to the 13F (forward observer) Senior Leader Course (SLC), Artillery Basic Officer Leadership Course (BOLC), and Field Artillery Captain's Career Course (FACCC), which are significant and appropriate; but graduates of these new programs of instruction (POI) have yet to reach the deploying force. To improve understanding of precision munitions, FA officers need access to material previously taught in the Excalibur new equipment fielding team. Additionally, junior FA officers need exposure to material, such as airspace coordination, collateral damage estimates, and technical PSS-SOF instruction, currently taught in 13F SLC and Targeting Warrant Officer School. Some required updates can be incorporated into the existing POI. For example, in-depth BIP management can be added to the gunnery portion of training of BOLC and FACCC.

We consider the introduction of the precision guidance kit (PGK) as an opportunity to hone the precision skills of artillery leaders. Acquiring 10-digit grid and training target mensuration should be included in the PGK training plan. Training should be carefully developed, to focus on precision fires planning and coordination, and considerations for tactical employment not just delivery system requirements.

FSOs need to know how to doctrinally incorporate Accelerated Precision Mortar Initiative (APMI), Excalibur, and eventually PGK into echeloning precision and near-precision fires coverage.

CAS employment. As fire supporters, it is important to realize the influence the unmatched levels of air support and aerial ISR in this conflict have had on the combined arms fight. Due to the lack of an air interdiction mission or counter air mission, air support is available to maneuver units in Afghanistan at greater levels than during any other conflict in recent history. These large numbers of CAS missions and air weapons teams (AWTs) have been a great asset on the battlefield; however, it has now created an over reliance and demand for CAS and AWT that will most likely not be fulfilled in future conflicts. Air assets are favored for perceived ease and speed. Guidance and restrictions (such as rules of engagements and tactical directives) in theater favor the use of CAS and AWT as "direct fire systems" over indirect assets. Because a pilot can easily establish visual contact with a target, and the joint fires observer (JFO) can easily guide the pilot to a target from an eight-digit grid, JFOs perceive air support as more responsive and don't use precision indirect fire systems.

As fire supporters, we must ensure our maneuver counterparts understand the impact of relying on CAS and AWT. The capability to deliver surface-to-surface fires is their only 24-hour-a-day, all-weather indirect fire source. Fire supporters must be advocates for all indirect fires and familiarize maneuver commanders with the capabilities and limitations of these systems. They must be advocates for surface-to-surface fires, in much the same way as the air liaison officer is for CAS.

Firing unit capabilities. Currently, M777A2 firing locations do not cover all maneuver areas of operations (AOs) in Afghanistan, thus limiting Excalibur employment. Due to the wide dispersion of firing locations, autonomous platoon operations and force cap limitations, fires battalions, theater-wide, do not have overlapping, mutually supporting fires and cannot mass fires nor provide precision fires throughout the entire area of operations. Presently, RC-East artillery employs M777A2s, M198s, and M119s while RC-South



Photo by CPT Angela Chipman

Soldiers from the 2nd Battalion, 8th Field Artillery Regiment fire the M777A2 howitzer on 19 February 2011 at the National Training Center, Fort Irwin, Calif.

employs only M777A2s. RC-East has more of an IDF capability available, but both AOs have considerable FA coverage gaps. All the fires battalions responsible for M777A2 and Excalibur coverage have multiple missions, some supporting more than one brigade AO, adding complexity to employing indirect fires. Several deployed FA units' MTOE howitzers are the M119A2; however, in some cases they operate M777A2 during deployment with very limited pre-deployment training. The limited 155mm coverage, difficulties with cross-brigade indirect fires, and lack of institutional understanding of a digitized howitzer exacerbates limitations of Excalibur employment.

When implemented, the pending composite M777A2/M119 FDU will have a positive impact on the capability to deliver precision indirect fires in theater. However, this will take time to realize, and there are solutions that can be implemented immediately. Deployed units should employ all operational M777A2s in Afghanistan and replace all existing M198s with M777A2s, expanding available Excalibur delivery. Lethality and accuracy can be improved by utilizing M777A2s for all forward operating base (FOB)-oriented indirect fires operations, while maintaining M119A2s for missions requiring mobility. To ensure a common understanding of the capabilities and limitations of the M777A2 and Excalibur munition, fires battalion commanders, supported brigade fires cell, and CJTF FSCOORDs should track precision-guided munition (PGM) capabilities, along with the five requirements for accurate predictive fire. Additionally, PGM capability needs to be reported and visible to the maneuver commander to ensure he understands both the capabilities and limitations of his organic precision weapons systems.

Airspace management. Airspace management is often cited as the major reason for the limited use of Excalibur and other IDFs. Many maneuver commanders and fire supporters believe the employment of IDF restricts the use of other systems sharing a given airspace. In some cases, the use of "hot-walls" or restricted operations zones (ROZ) limit the airspace for AWT, ISR, and CAS. An additional concern is the overall timeliness of effects on target. As Excalibur is always fired high angle, more time is required to clear airspace than a low angle mission. Time of flight also affects the timeliness and associated risks, where time of flight for direct fire systems is significantly shorter. Typical time of flight for an Excalibur missions fired in theater is between 90 and 120 seconds, based on range. The greater time of flight equates to more opportunity for target movement or for civilians to enter the battlefield target area.

As surface-to-surface fires experts, fire supporters need to recognize these legitimate concerns and manage airspace in order to best integrate surface-to-surface IDFs into the airspace management framework. Successful units in Afghanistan use named hot walls with multiple pre-cleared BIPs maximized to facilitate greatest coverage with the fewest restrictions. The phrase "hot walls" refers to a non-doctrinal, field expedient restrictive

Units preparing to deploy to Afghanistan need to train on hot-wall development and airspace management supporting precision fires employment. Training should integrate the brigade air element (BAE), task force fire support element, and fires battalion. Only by working within the current airspace management process and addressing the characteristics of current precision munitions will we, as fire supporters, be able to increase the use of these munitions.

airspace coordination measure, built along the gun-target-line with a predetermined width and altitude encompassing ballistic trajectory for the round and the BIP. BIP planning should be synchronized with the battlespace owner and integrated with airspace coordination measures to support the area of operations. Units preparing to deploy to Afghanistan need to train on hot-wall development and airspace management supporting precision fires employment. Training should integrate the brigade air element (BAE), task force fire support element, and fires battalion. Only by working within the current airspace management process and addressing the characteristics of current precision munitions will we, as fire supporters, be able to increase the use of these munitions.

The vast majority of the recommendations, made in this article to increase Excalibur and surface-to-surface IDFs, came directly from units currently fighting with fires in Afghanistan. There are many reasons for the limited IDF and Excalibur usage in Afghanistan; however, the seven focus areas (CJTF/RC FSE capability; combined arms Excalibur live-fire training; FIST collective training; employment, institutional and FA schools training; CAS employment; firing unit capabilities; and airspace management) were the most prominent areas observed by the assessment team.

Overall, we found incredible work being done by fires battalions to develop TTPs and increase the use of Excalibur and IDFs. However, as with many issues concerning the delivery of indirect fires, it was the fire support side of the equation where the vast majority of the challenges currently exist, in regards to the employment of Excalibur and surface-to-surface indirect fires. Since the integration of fires with maneuver has historically been, and continues to be, the most difficult task in the delivery of fires, this is not surprising. Realizing this, as fire supporters, we must increase our precision munitions expertise; but, more importantly, we need to once again be advocates for surface-to-surface indirect fires, including Excalibur. This will ensure we have the fire support expertise and experience required to support the maneuver commander, for the remainder of this conflict and for the next, with all his IDF requirements.

Editor's Note: *This article first appeared in the March-April 2012 issue of Fires.*

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EGYPTIAN GENERAL MOHAMED FAWZI

PART II: REFLECTIONS ON THE IMPACT OF THE YEMEN GUERILLA WAR ON EGYPTIAN MILITARY THINKING

CDR YOUSSEF ABOUL-ENEIN, U.S. NAVY

As the United States cultivates a new generation of warrior-diplomats, it is vital that we continue to explore regional perspectives of strategic interest. The events of the Arab Spring have ushered in a period of great change that will affect political as well as military relationships for some time. The 2011 Egyptian Revolution and the assumption of power by “The Supreme Council of the Armed Forces” have led to many questions as to the thinking of the two dozen officers constituting this ruling body. Part of understanding this generation of senior officers is to comprehend not only the psychological impact of the devastating Six-Day War, but the influence of events in Yemen prior to 1967 that shaped the thinking of operational and strategic leadership. In this series, CDR Aboul-Enein introduces readers to the views of GEN Mohamed Fawzi on the impact of the 1962 Yemen War on Egyptian military thinking. For five years, 60,000 Egyptian combat forces found themselves entrenched in a quagmire in Yemen. For those making policy in Egypt, such as President Nasser and Field Marshal Amer, the war in Yemen sharpened Egyptian combat effectiveness. Fawzi instead argued the opposite was the case, and that leaders such as Nasser and Amer deluded themselves into a false sense of security. In Yemen, Egyptian units were engaged in fighting a guerilla war, not a conventional war against a qualitatively formidable Israeli war machine. Fawzi made a compelling argument that the Yemen War had eroded Egyptian combat effectiveness on the eve of 1967 war with Israel. CDR Aboul-Enein has done much to educate Soldiers, Sailors, Marines and Airmen both in classrooms and in his published writings. I applaud *INFANTRY* for giving CDR Aboul-Enein’s work a forum; the magazine is helping him in his quest to educate us all using direct Arabic source materials of military significance. This is a vital part in cultivating the intellectual capital of our most strategic asset — our active, Reserve, and civilian personnel.

— Foreword by LTG Walter E. Gaskin, U.S. Marine Corps
Deputy Chairman, Military Committee, NATO

In Part I, we examined the strategic dynamics between Egyptian leader Gamal Abdel-Nasser, his War Minister Field Marshal Abdel-Hakim Amer, and the vortex of pan-Arabism coupled with the greater competition between the Soviet Union and the United States. Causes of Egypt’s brutal defeat in the 1967 Six-Day War can be traced as far back as the Yemen War of 1962-1967. Although the war had some positive outcomes for Yemen, most of the negative outcomes of the war were placed on Egypt, which only further harmed Egypt when it came to preparing for the 1967 war. Egyptian leadership attempted to prepare for the 1967 war by creating strategies

such as the Unified Arab Command and Plan Qahir (Conqueror). In his memoirs, GEN Mohamed Fawzi explains that, unfortunately for Egypt, these creations proved to be a futile effort in preparing Egypt for the Six-Day War.

The Yemen War (1962-1967): Fawzi’s Perspective

COL Abdullah Sallal and a cabal of Yemeni officers staged an effective coup with one mistake: it failed to capture or kill the Imam of Yemen. Imam Yahyam, the last ruler of the Hamiduddin Dynasty that ruled Yemen, retreated to the country’s northern mountains and waged an insurgency to recapture his rule with the support of Saudi

Arabia. From Nasser, Sallal requested Egyptian intervention in Yemen to keep his republican coup alive. Nasser, who was eager to regain Egyptian prestige after the dissolution of the unification project with Syria known as the United Arab Republic (1958-1961), sent Anwar Sadat on a fact-finding mission to Yemen. He was to assess the needs of the Yemeni Revolutionary Command Council and evaluate its leader, COL Sallal. Sadat formed a military coordination and assessment group composed of two colonels and one lieutenant colonel. Why such a small group, and why no flag officers joined the group, remains a mystery. It is likely that Nasser wanted an assessment independent of Amer, and sent Sadat who chose his own officers. Sadat wired an immediate request to Nasser for:

- Saaqah (Special Forces) Battalion;
- One wing of close air support fighter bombers; and
- Aerial reconnaissance airframes.

Cairo had to plan for a 2,000 kilometer logistical supply line from Egypt to Yemen, and Egypt’s aerial capabilities were very limited, such that BG Ahmed Nuh suggested outfitting PK-11 jet trainers with missiles. Among the options discussed was outfitting the PK-11 airframe with Oerlikon air-to-surface missiles. This plane was put together locally in Egypt and could be transported in pieces to Sanaa and then loaded onto an Antonov-12 or Ilyushin-14 heavy lift cargo planes along with a cargo of 500-pound bombs. The Egyptian air force (EAF) conducted a round-the-clock effort, landing AN-12 and IL-14 transports in Sanaa carrying troops, supplies, planes, and parts. In the first week, Egyptian troop levels stood at 1,000 with initial Egyptian estimates that they could suppress the Yemeni royalist insurgency in three months. This was wildly optimistic, and Fawzi wrote that the Egyptian general staff



Map 1

did not even possess topographical maps of Yemen. The skirmish at Sirwah made Egyptian generals recognize the reality of the situation when all members of a special forces team were wiped out, and 1LT Nabil al-Waqqad became Egypt's first casualty in Yemen. Royalists organized tribes to oppose the Sallal revolution, and anti-Nasserists like Saudi Arabia and Israel saw an opportunity to draw Egypt deeper into a quagmire. Fawzi did not mention or go into detail about external groups meddling in Egypt's intervention in Yemen. He does, however, specifically mention the Central Intelligence Agency (CIA) and Saudi Arabia. Although Saudi support for the royalists and Egyptian military incursions in the southern Saudi city of Najran are well-documented, Fawzi's mention of the CIA contains no backing and appears to be in the realm of conspiracy. As Egyptian special forces became overwhelmed, additional combat forces were sent to Yemen. The escalation included 13 divisions, seven special forces battalions, one armored division, 10 artillery battalions, MiG-15/17 aircraft, one destroyer, two frigates, two troop carriers, one minesweeper, as well as technical, medical, and administrative units to support this force.

By 1964, Egyptian GEN Anwar al-Qadi commanded 70,000 troops in Yemen. Although large, this force maintained control of only the triangle of T'az, San'aa, and the port of Hodeida. Nasser's frustration led him to replace al-Qadi with Field Marshal Abdel-Mohsein Murtaji. The new field marshal brought with him a division of Yemeni regulars trained in Egypt. Murtaji changed tactics, deploying the Yemeni division along the border with

Saudi Arabia and the border with Oman. The new commander in chief for Yemen asked for and was given both political and military powers, a first for the highly bureaucratized and control-obsessed Egyptian military. Murtaji also combined Egyptian forces with Yemeni units on joint search and destroy missions against royalist insurgents. Fawzi wrote that Egypt's conventional tactical mindset was always pitted against guerilla tactics and that Egyptian intelligence could never get a real understanding of Yemeni royalist factions, the size of their forces, or their evolving capabilities. Egyptian military planners tried to understand and categorize Yemeni fighting methods, but ambushes, hit-and-run attacks, and guerilla deployments followed no predictable logic, according to Fawzi. He lamented that Egypt never used its five-year war to adopt, develop, or cultivate counterinsurgency tactics, which could have proved useful in the 1967 war. Fawzi attributed this lack of development to the Egyptian pride of being seen by the world as a modern and conventional fighting force, therefore causing Egypt to not focus on the type of war being fought. Fawzi commented on the Egyptian forces' indiscipline at firing arms, designed to reassure the Egyptians

and not necessarily hit their targets. The largest expense during the Yemen War was the consumption of ammunition, missiles, and bombs. Murtaji instituted what Western military historians call an enclave system; those areas held by Egyptian forces were furnished with a military governor, who was an Egyptian and not Yemeni. By 1965, Murtaji's system led to Egypt being effectively in charge of Yemen and diminished Yemeni republicans in the eyes of the Yemeni people. Egypt faced the wicked dilemma of providing economic and development aid to Yemen, while being considered an occupational force by segments of the Yemeni populace. Egypt paved roads, built schools, and developed the port of Hodeida. Egyptians attempted to reframe the conflict as an anti-colonial struggle and launched Operation Saladin, sponsoring Yemeni insurgents against the British Crown colony at Aden.

Fawzi Reflects on the Positive and Negative Effects of the Yemen War on Egyptian War Strategy

In the summer of 1965, the Egyptians agreed to the Jeddah Accords, but it would take two years for Egypt to pull its forces out of Yemen. The accords recognized the Yemen-Arab Republic in return for the evacuation of Egyptian forces from Yemen. The reason for the two-year delay was the republican Yemenis not wanting Egyptian forces to leave without first stabilizing the country. The last Egyptian infantry division departed Yemen in March of 1967. As they withdrew, Yemeni special forces protested in front of Egyptian headquarters in San'aa and an exchange of small arms fire ensued. Except for this incident, the withdrawal

occurred gradually and with the oversight of Morocco and Sudanese military observers. However, the insurgency, stoked by Egypt in Aden, would later lead to the creation of the first Marxist Arab state in south Yemen in 1968, and the split between the north and south would continue until 1990, when the two regions of Yemen merged. The legacy of the Yemen War endured until 1994, when Marxist Yemen, unhappy with targeting by militant Islamists, attempted to secede, and a yearlong war of secession unified the country by force.

Fawzi assessed the strategic successes of the Yemen War for Egypt. They included:

- Opened the eyes of the globe to Yemen's underdevelopment. The Imam of Yemen ruled the country in a medieval fashion. For instance, only he was allowed to own a radio, and the country possessed little in the way of hospitals, schools, or industry;
- Ended British colonialism of Aden;
- Created a strategic Arab progressive state in the Arabian Peninsula;
- Changed the strategic calculus of Western oil and gas companies in the region;
- Oriented Yemen to the national liberation orbit and the soviet sphere of influence; and
- Stabilized the republic of Yemen.

Each of these perceived strategic successes outlined by Fawzi are debatable. Fawzi also outlined the arguments of Egyptian opponents to the Yemen War. The arguments included that the war:

- Created an economic strain on Egypt, particularly in 1964 and 1965;
- Caused combat fatigue of units returning to Egypt, which would have a direct impact on the outcome of the 1967 Six-Day War;
- Increased Egyptian disease, combat injuries, non-battle injuries and combat stress, leaving Egyptians with a segment of society needing lifetime care; and
- Used military decorations and promotions to lift morale and not for combat performance, which crept into Egyptian military culture.

Another argument against the war is that Egyptian media described skirmishes with guerillas as major battles, causing Egyptians to believe their own propaganda. Fawzi advocated that in hindsight, Egyptian media should have called these counter-guerilla operations and not military or combat operations. What Fawzi alluded to is that conventional combat operations involve a two-dimensional known adversary and not a multidimensional asymmetric and faceless adversary. The Yemeni royalist insurgents fought primarily with small arms because tribal armies lacked armor, tanks, planes, and real artillery. Egyptian military planners in Yemen wrote to Cairo that Yemen was an ideal proving ground for practical combat training. The training was *tadreeb damawi* (bloodied training). Fawzi found this belief to be delusional because

Fawzi lamented that the Yemen War led Egypt to abandon joint operational or combined arms training, and instead the army dominated the fighting. Aerial defense and air offense was neglected, and he cited that no aerial defense training occurred for five years. Sinai defenses were completely neglected as an area for future military operations. The only positive outcome for the Egyptian military was that it forced it to take seriously the use of artillery in guerilla operations, logistical planning, and vehicle wear-and-tear rates in actual combat.

this was not the same level of training needed to fight the Israeli Defense Forces, which was a modernized conventional force. Fawzi lamented that the Yemen War led Egypt to abandon joint operational or combined arms training, and instead the army dominated the fighting. Aerial defense and air offense was neglected, and he cited that no aerial defense training occurred for five years. Sinai defenses were completely neglected as an area for future military operations. The only positive outcome for the Egyptian military was that it forced it to take seriously the use of artillery in guerilla operations, logistical planning, and vehicle wear-and-tear rates in actual combat.

Futhermore, Fawzi pondered what, if anything, the Egyptian army learned in Yemen. Additional tactical and operational lessons learned by the Egyptian Army were: minimal coordination among branches of the military, an exposure of

senior personnel enriching themselves at the expense of military objectives, and massive waste of military equipment as well as a total lack of maintenance of hardware. Officer cliques began to develop as a consequence of the war. The cliques had total contempt for Nasser and politicians in Cairo, leading to further solidification of the cult of Field Marshal Amer. The corruption among Amer and his cadres in Yemen was later dealt with by cashiering Amer's military secretary, Ali Shafiq Safwat, in 1966. That same year, the armed forces chief of operations produced a report revealing that the war in Yemen was stretching the armed forces to the point that defending Egypt's front with Israel was becoming compromised. Fawzi endorsed this study as army chief of staff, and, in August 1967 — weeks after the Six-Day War — he discovered the report in Amer's safe within the Defense Ministry, unread and unanalyzed.

The Unified Arab Command: Neither a Unified Command nor a Unified Army

In Fawzi's memoir he asserted that the Unified Arab Command created in 1964 was neither a unified command nor a unified army. Egyptian GEN Ali Amer (no relation to Field Marshal Abdel-Hakim Amer) was appointed commander of the Unified Arab Command to coordinate defensive and offensive actions of the Arab armies of Jordan, Egypt, and Syria, the three front-line states in a state of war with Israel, as well as aligning the efforts of second tier supporting Arab states like Saudi Arabia, Iraq, and Libya. An Arab Defense Council was agreed upon as consisting of senior officers from Arab League nations. Plans were drawn up for defensive military action leveraging the armed efforts of all Arab nations against Israel. The eastern front (Syria and Jordan) would be supported militarily by Iraq and Saudi Arabia. The southern front (Egypt) would be militarily supported by Algeria, Libya, and Sudan. Egyptian Air Defense GEN Abdel-Moneim Riad

was appointed chief of staff of the Unified Arab Command. Riad was not among Abdel-Hakim Amer's clique and was dispatched to a forward command in Amman, Jordan, composed of several Egyptian special forces battalions. On the eve of the 1967 war, the Unified Arab Command headquartered in Amman possessed no real unified divisions, units, or armies. Of note, these unified plans against Israel were on paper only, and no real integration of forces or order of battle was implemented, much less discussed. In 1966, Egypt and Syria agreed in principle to a unified military command structure, but never got beyond agreeing over defensive plans. These discussions involved Fawzi, who represented Egypt, and GEN Ahmed Suweidan, the commander in chief of Syria's armed forces. In his memoirs, Fawzi highlighted one defensive plan from 1966, which involved one Arab nation's air force reacting in the case of the Israelis destroying the air forces of the other. In hindsight, Fawzi said that the concept of a Unified Arab Command was wishful thinking and could never succeed, as no Arab nation's general staff would relinquish command and control to another nation.

It is important to note that the Unified Arab Command plans of 1964 and 1966 are significant. In them lay the seeds for the simultaneous attacks conducted in the 1973 Yom-Kippur War, in which Egypt and Syria planned a coordinated assault to be conducted on 6 October 1973. They also revealed the level of concern and confidence Arab senior military planners had for their air force and air defense forces. They were aware of Israel's potential to strike a knockout blow to Egypt's air forces and hoped to have a retaliatory strike option from the air forces of an Arab League member state.

Options for the Egyptian General Staff (1955-1966)

In an attempt to coordinate Egypt's growing influence in the third world and African anti-colonial movements, the military needed to be responsive. However, Egyptian military planners could not provide Nasser with options until the 1955 Czech Arms Deal, as they lacked the technological offensive capability to imagine a comprehensive offensive plan against Israel. This changed with the acquisition of advanced Soviet military hardware. Fawzi discussed that the availability of these weapons led to a host of planning options for Egypt, leading to a change in doctrine by 1958. Among the options undertaken were supporting Algeria's National Liberation Front (FLN) and deploying Egyptian forces to the Congo in support of Patrice Lumumba's newly independent country liberated from brutal Belgian rule. Fawzi also discussed that the seeds of Plan Qahir (Conqueror) would be developed by 1964. The plan was developed in response to Israel diverting the Jordan River from Jordanian use.

Plan Qahir (Conqueror)

Qahir was a comprehensive plan to prepare Egypt for a total war, integrating civil and military institutions toward a collective war effort against the Israelis. Although the Egyptians would face a crushing defeat in 1967, Qahir does show the Egyptians' earliest attempt to integrate tactical, operational, and strategic planning — at least on paper.

Plan Qahir had its beginnings in 1956. The plan was a layered

defense to prevent Israeli combat units from reaching the Suez Canal Zone and to wear down Israeli forces in the Sinai. The plan was to use geography and terrain to mire Israeli forces. Artillery kill zones were assessed, and bottlenecks determined from which the EAF would bomb and strafe. Next to UN forces would be an Egyptian combat layer of armored reconnaissance, border guards, and special forces units. By 1966, Plan Qahir would have a naval and air force counterpart (the air force plan was code named Fahd or Leopard). The operations section of the Egyptian chief of staff laid out and scripted Plan Qahir, assigning orders of battle and areas of operation within the Sinai from the canal zone to the thin layer of UNEF forces manning the Egyptian-Israeli border. Wargame Faris (Mounted Knight) was conducted in February 1967, and the 3rd Infantry Group was used in this exercise, which was the earliest rehearsal of Plan Qahir. It revealed major problems to Egyptian commanders regarding preparation of the theater of operation, logistics, poor maps, and poorer map navigation skills. The EAF and navy provided token assets for the exercise. Plan Qahir divided the Sinai between the Giddi and Mitla Passes, with Gaza left primarily to the Palestinian National Army reinforced with Egyptian advisers, equipment, and officers. Egyptians concentrated their forces along the few access roads linking the Sinai from east to west.

Despite the availability of Plan Qahir, which was at least partially exercised and familiar to the upper level commanders, Amer decided to completely ignore Qahir and improvise orders. Improvised orders work well in the theater level, where the commander has a unified command and understands the battle space. However, they are a disaster at the strategic level, where one has created conflicting and competing chains of command. Amer not only created these conditions but also only visited the Sinai front for parade inspections and not for actual evaluations of field combat capabilities.

Plan Qahir's Failed Implementation in the 1967 War

The Egyptian general staff faced a myriad of tactical and operational problems in implementing Plan Qahir. Among the challenges Fawzi highlighted in his memoirs are:

- Reinforcing airports;
- Creating and sustaining crossing bridges along the Suez Canal (When Qahir was created, Egypt still retained the Sinai, and this problem involved protecting crossing points from Israeli aerial strikes);
- Identifying wells and setting up more than 60 water tanks to aid forces traversing the Sinai; and
- Creating a secure integrated communications link between headquarters in Ismailiyah, along the Suez Canal, and into the Sinai.

Strategically, the problem of acting on the plan was that the Egyptian constitution gave no clear lines of responsibility for undertaking such massive projects. All responsibility for military preparations was designated constitutionally under the National Defense Council, but within this council no one seemed to take ownership of a particular operational problem. In 1966, a Ministry for Military Manufacturing was created as an attempt to locally produce war materiel such as ammunition and artillery shells.

Egypt had ambitions to eventually produce long-range missiles and imported German scientists to jump-start this project. Egypt also entered into an agreement with India to produce jet fighters, in which Egypt would produce the engine, and the Indians would produce the body of the fighter. Fawzi wrote that all of these projects failed, as they were undertaken by impulse and no real studies on sustainment, economics, or personnel were made.

Fawzi commented that the Egyptian reserve mobilization plan was a success on paper only, no practice or drill was conducted to test mobilization before the 1967 war. A crippling reason for the utter defeat of Egyptian arms in 1967 was that while Plan Qahir was perhaps the only coherent military plan of action, Field Marshal Amer discarded the plan. He instead chose to improvise, sending bodies into the Sinai without any planning, much less with mission statements for these units. Fawzi singled out 14 May 1967, as the day Amer began to simply improvise military tactics, and the trickle-down effect of this would be confusion and paralysis among the command and staff. Trained units were mixed with units needing training. In one case, an entire infantry unit that was called up had not completed drills since 1956, during the Suez Crisis. More than a few field commanders first met while in the area of operation or in call up processing areas. Command and control for the 1967 war was not conducted utilizing the general staff, but was a war run by Amer through his secretariat and its chief, Shams Badran.

Lacking true military specialists, the war digressed into anticipating Amer's whims and command decisions. Fawzi was army chief of staff at the time, and he commented that the general staff was completely bypassed. Shams Badran would issue orders to the field without coordinating with the army chief of staff. When the EAF chief referred to hardened shelters for jet fighters as useless tombs, Badran countermanded the EAF chief's advice to Field Marshal Amer that hardened shelters for jet fighters were worthless and tactically leave planes vulnerable to surprise attack. In the midst of the 1967 Six-Day War, Amer realized

Shams Badran's secretariat was inadequate and placed other military officers to process his military orders. In regards to the military strategy of the 1967 War, Fawzi provides military readers an excellent lesson in the breakdown of unity of command, the problems with constant improvisation, and the difficulty of getting an institution, such as a field army, to respond to rapid changes. If Egypt had fully planned and implemented Plan Qahir, it may have mitigated the debacle somewhat of Egyptian forces in the 1967 Six-Day War.

Conclusion

Fawzi's memoirs provide insight into how the Yemen War further unprepared Egypt for the 1967 Six-Day War. Although the war with Yemen provided several benefits to Yemen, such as national stabilization and world recognition, it proved more detrimental for Egypt. Egypt suffered economically throughout the five long years of the war, and lost many supplies and artillery to the fighting in Yemen. Egypt's lack of supplies and exhausted Armed Forces units proved to be a huge disadvantage as the 1967 War drew closer. Although the country's leaders attempted to strengthen its military strategies by creating Plan Qahir, the failed implementation of the plan caused the entire effort to be ineffectual. Along with failed implementation of military strategy, Egypt's lack of both training and consistent leadership would prove to be the final causes of its defeat in the 1967 war, as will be discussed in a later article of this series.

CDR Youssef Aboul-Enein is author of *Militant Islamist Ideology: Understanding the Global Threat*, published by Naval Institute Press in 2010. He teaches part time at the Industrial College of the Armed Forces and has a passion for highlighting Arabic work of military significance to America's military readers. CDR Aboul-Enein wishes to thank Dorothy Corley, who recently graduated with her bachelor's in international relations from Boston University, for her edits and discussion that enhanced this work. Finally, he wishes to express his appreciation for the National Defense University Library, the John T. Hughes Library, and Blackwell Library at Maryland's Salisbury University for providing a quiet place to read and write this series.

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ASAT: NEW COURSE PROVIDES SOLDIERS WITH CRITICAL SKILL

COL WALTER E. PIATT

After 10 years of deploying Soldiers into harm's way to diverse operational environments, we have been able to achieve success in the various domains — in the air and space, on land, and at sea. However, there is one domain we have yet to fully explore — the human domain. It is understanding the human domain which provides Soldiers and leaders with the critical skills necessary to keep Soldiers alive on the battlefield. They need the ability to proactively observe their environment for potential threats and how to better understand the human dimension of those environments.

The Maneuver Center of Excellence (MCoE) is currently conducting a pilot course to help Soldiers become more situationally aware on today's battlefield. The course — Advanced Situational Awareness Training (ASAT) — falls under the Squad: Foundation of the Decisive Force initiative, and it also meets the criteria for outcomes-based training and education, a part of the Army Learning Model (ALM) 2015. ASAT is taught as a joint effort between civilian instructors working for Orbis Operations and members of the 197th Infantry Brigade on Fort Benning, Ga. The Orbis instructors are a mix of former military, civilian law enforcement, and federal law enforcement professionals with a wealth of operational and tactical knowledge in a variety of

environments including Detroit, Baghdad, Bagram and all places in between. The Soldiers from the 197th are NCOs with varying degrees of deployment experience who are recent graduates from the two ASAT courses currently being offered on Fort Benning.

At the very core of its tenets, ASAT teaches Soldiers how to be more situationally aware through human behavior pattern recognition and analysis.

"ASAT is a scientifically validated and battle-tested training program that allows individuals to cognitively make sense of highly complex environments," said COL (Retired) Johnny W. Brooks, MCoE Integrated Training Environment Planning and Integration Team, Directorate of Training and Doctrine. "ASAT is an experiential-based, predictive tactical problem-solving system that improves with each environmental exposure. ASAT applies across culture, geography, type of operation, and is an enduring skill set that will never be obsolete."

These central themes allow Soldiers to identify potential threats, relay that information to those who need it most — Soldiers on the ground — and to be proactive in mitigating those threats before they take lives.

As ASAT is still in its infancy, it is primarily taught to Soldiers,

A U.S. Army National Guard Soldier scans the nearby ridgeline along with other members of the Provincial Reconstruction Team Kunar Security Force element.

U.S. Army photo



NCOs, and officers assigned or on TDY to the MCoE. ASAT's two courses are a five-day basic course and a 22-day train-the-trainer course.

The capstone for the five-day course is a field training exercise (FTX) where students are spread out over four observation posts (OPs) and one command post (CP) that is oriented around a military operations on urban terrain (MOUT) site (replicating an environment one might encounter while deployed in support of combat operations). Students learn to integrate various optics while observing 10 scenarios, which are supported by 30-40 role players. In each of these scenarios, students must pick up on the threads and cues presented by the role players to determine both the threat and to figure out the outcome of the scenario. Each of the OPs feeds information into the CP — also manned by students — where it is collated and processed. The ASAT students discern whether the information is critical or trivial, then disseminate that information back out to the OPs for their situational awareness and potential action.

While the 22-day course also has an FTX, the focus is on building the capabilities of future instructors so they become proficient on the five-day course curriculum, know how to build the course, develop scenarios, and incorporate role players. All instruction is student led with oversight and guidance provided by the



Figure 1— ASAT Concept

ASAT master trainers. The capstone of the 22-day course is the final week where the students must build and pitch the modules of a five-day course in front of the six ASAT master trainers/instructors. Students finish their training fully prepared to go back to their units and teach Soldiers how to be more situationally aware.

The MCoE is pursuing both short-term and long-term approaches to get ASAT to the operational force. To get at these approaches, the MCoE is working along three lines of effort (LOEs):

* Units within the “trained and ready” and “reset” phases of the Army Force Generation (ARFORGEN) cycle;

* Initial Entry Training (IET) and Initial

Military Training (IMT) Soldiers and future leaders; and

* Through institutional training.

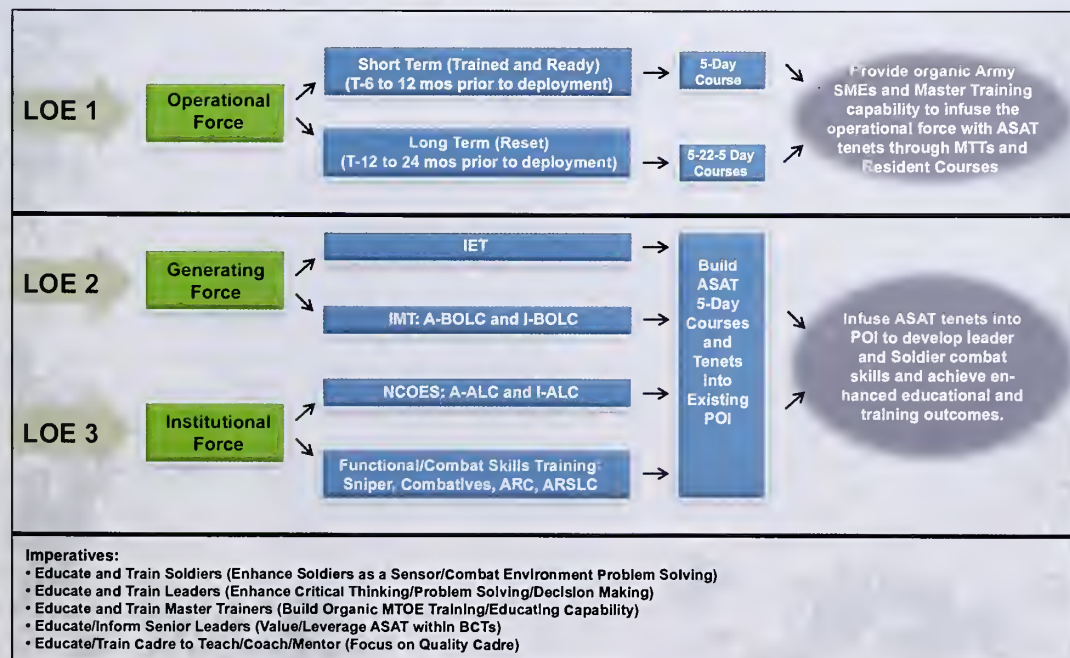
It is through these three LOEs that the MCoE and the 197th Infantry Brigade will infuse the tenets of ASAT throughout all training, to all ranks. These critical skills help us to better understand the human domain, which will help us to save lives.

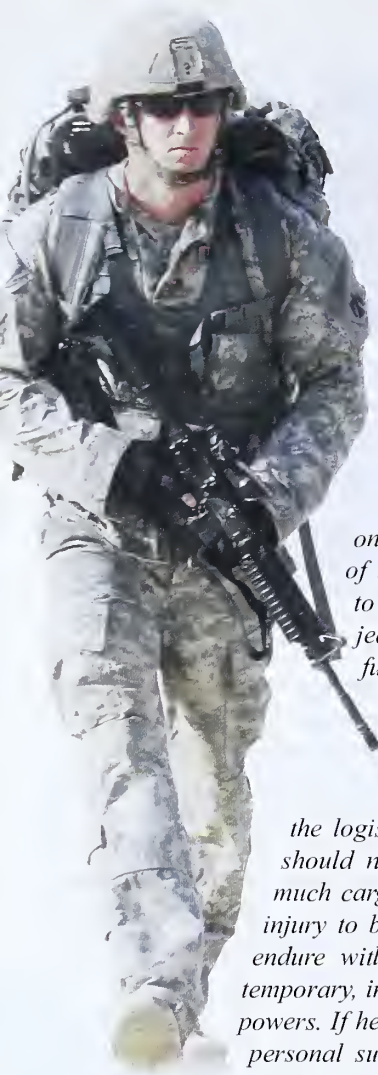
COL Walter E. Piatt is currently serving as the 10th Mountain Division's deputy commanding general for support, Fort Drum, N.Y. He previously served as commandant of the U.S. Army Infantry School at Fort Benning, Ga. He enlisted in the Army in 1979. After attending Basic, Infantry, and Airborne training at Fort Benning, he was assigned to the 82nd Airborne Division, Fort Bragg, N.C.

His enlisted service also included assignments with the 172nd Infantry Brigade, Fort Wainwright, Alaska, and the 101st Airborne Division (Air Assault), Fort Campbell, Ky. COL Piatt was commissioned in 1987 upon graduating from Lock Haven University with a bachelor's degree in biology.

COL Piatt's command experience includes serving as commander of A Company, 4th Battalion, 26th Infantry Regiment, Fort Dix, N.J.; commander, C Company of the Air Base Ground Defense School, Fort Dix; commander of C Company, 5th Battalion, 87th Infantry Regiment (Light), Fort Kobbe, Panama; commander of the 2nd Battalion, 27th Infantry Regiment, 25th Infantry Division, Schofield Barracks, Hawaii, and Operation Enduring Freedom, Afghanistan; and commander of the 3rd Infantry Brigade Combat Team, 25th Infantry Division, Schofield Barracks and Operation Iraqi Freedom.

Figure 2 — ASAT Initiative





WARFIGHTER LOAD, SURVIVABILITY, AND SHOOT-AND-MOVE DYNAMICS

CHRISTOPHER PALMER

"On the field of battle man is not only a thinking animal, he is a beast of burden. He is given great weights to carry. But unlike the mule, the jeep, or any other carrier, his chief function in war does not begin until the time he delivers that burden to the appointed ground. It is this distinction that makes all the difference. For it means that the logistical limits of this human carrier should not be measured in terms of how much cargo he can haul without permanent injury to bone and muscle, but what he can endure without critical, and not more than temporary, impairment of his mental and moral powers. If he is to achieve military success and personal survival, his superiors must respect not only his intelligence but also the delicate organization of his nervous system."

— S.L.A. Marshall

The Soldier's Load and the Mobility of a Nation, 1949

The consequences of warfighter load have been discussed and debated for thousands of years, as have the trade-offs between "up-armoring" and "agility and flexibility" as the means to lethally engage and defeat the enemy in close combat. Survivability in combat is more than armor and helmets; it is also allowing the warfighter the adaptability and flexibility to perform necessary actions for lethal engagement and quickly get to cover and concealment. These actions require situational awareness to detect and discriminate targets and to quickly find what terrain supports cover and concealment. In short, it requires the optimization of a warfighter's action-perception capabilities within some level of ballistic protection and a mission-specific "fire load." A warfighter's ability to maintain situational awareness and accurately engage the enemy transfers directly to the survivability and mobility of the squad and the ability to execute collective tasks. This type of survivability can't be quantified in terms of how many bullets a plate may stop, the fragmentation protection of soft armor, or "back face deformation" measured in millimeters after shooting a plate. This type of survivability means the enemy round never reaches its intended target — the U.S. warfighter. At issue is not a debate about the need for armor or fire load but the understanding and quantification of this trade-off in operational

terms (e.g. how much slower and less accurate is the warfighter in equipment configuration X vs. Y, and why?). Where is the U.S. warfighter along this continuum of the protection-lethality-mission effectiveness trade-off? How can empirical study of warfighter performance for actions on the objective provide additional insight into what senior NCOs and company commanders already know from their experience in combat? These are the questions central to this article, and I will attempt to provide initial answers in terms of operational consequences from recent research conducted on shoot-and-move dynamics.

In 1944, the U.S. Army conducted an early study of load to look at backpack positions on different-sized Soldiers while standing. Since then, research has been conducted on the consequences of load on energy expenditure during road marching, the biomechanics and forces involved in injury, and some levels of task performance (obstacle course times, limited marksmanship, etc). Most of this research addresses the consequences of load on road-marching performance, energy expenditure, and hydration requirements during locomotion, etc. Much less research has been conducted from a true operational perspective. For example, warfighters in operational conditions scan their environments for potential threats while road marching. This requires a shift in thinking from road marching as the study of "loaded locomotion" to "on-the-move threat identification and discrimination," which leads to completely different questions about the consequences of load on visual performance. It's not that energy expenditure is unimportant; the point is only that an operational mindset is required for our questions to be more relevant to warfighters and ensuring scientists have an operational "so what" to answer.

The purpose of this article is two-fold. First and foremost, it directly communicates initial results about the consequences of load on shoot-and-move dynamics to those warfighters engaged in combat and making decisions that affect the survivability and mission effectiveness of the subordinates they serve. The second purpose is to contrast "up-front" survivability with the survivability of ballistic protection, and bring to the surface an argument that requires an understanding of both aspects of survivability to optimize warfighter performance, survivability, and mission effectiveness. U.S. warfighters carry more than ever before, and much of that load has been fielded with the specific intent of increasing survivability. Common sense tells us that sometimes too much load can not only injure a warfighter, but it can make him slower, less effective, more fatigued, and less aware of his tactical surroundings. This can certainly lead to an increased likelihood of being wounded or killed by the enemy and has serious consequences

for the accomplishment of collective tasks and mission success. What hasn't been quantified is how load affects warfighters' functional capabilities during shoot-and-move dynamics. In 2008, an attempt to "operationalize" science for a more relevant understanding of load during actions on the objective was initiated. Speed/accuracy trade-offs, visual perception, head-gun-trunk coordination, and postural control were assessed to try to provide an understanding of the consequences of equipment distribution on the lethality, mobility, and situational awareness of warfighters.

Lethality

not have a good handle on how much these capabilities are degraded under load. Quantifying the reduction in operational performance and understanding why this occurs with certain loads are the purposes of the initial investigation into shoot-and-move dynamics.

**Survivability/
Mission
Effectiveness**

Consequences of Load on Shoot-and-Move Dynamics

The following is a limited summary of three different studies used to understand the consequences of load on actions on the objective and comes from the understanding that consequences of load on the warfighter are best

Redefining Survivability

The term survivability — at least in the halls of those working material solutions (program managers, requirements generators, etc.) and Congress — is most often in terms of armor and where it should be placed. This aspect of survivability, while easily measured, isn't complete in an operational sense. In fact, this definition is best described as "after you've already been shot" survivability, as its focus is on how material solutions can stop enemy fire of all types. There is another important aspect of survivability — up-front survivability, which minimizes the chance of being shot in the first place. To understand this survivability, we must understand the consequence of load and its distribution on the ability of the warfighter to perceive threats and take efficient action given the circumstances. This type of survivability is much more closely related to an offensive operational posture and is defined within the relations between lethality, mobility, and situational awareness (Figure 1). All three are interconnected; situational awareness is necessary for mobility and lethality, and lethality allows the individual and squad to move more freely to perceive more about the ongoing situation during shoot-and-move dynamics. This requires us to conduct research in a way that does not attempt to separate the study of lethality, mobility, and situational awareness (e.g. break them apart by studying locomotion as mobility), since we are only interested in the mobility and situational awareness of lethality and vice versa. While a warfighter's common sense and personal understanding of this issue is beyond question, we do

Mobility

Figure 1

**Situational
Awareness**

understood within the tenants of shoot, move, and communicate. From this perspective, marksmanship can't be studied during static range performance and must be nested in dynamic movement that warfighters are engaged in during a firefight. Marksmanship must be dynamic and must involve the transition from movement to a static upright posture that provides the foundation for quick and accurate fire on the enemy. The following efforts sought to replicate these conditions as best as possible within the laboratory environment, and while no lab conditions are the same as combat, they provide a sound basis to understand the consequences of load. If these consequences are operationally significant in the laboratory, then they can only be further degraded in real operations (difficult terrain, fatigue, stress, loss of sleep, etc.).

All configurations used real or mock equipment of the same size, weight, and shape and were loaded within general operational practices. When this study started, operational data suggested an average load of around 90 pounds for the Infantryman in theater. Load has increased

An Infantryman with the 1st Battalion, 2nd Infantry Regiment, 172nd Infantry Brigade, climbs a ladder to set up a defensive watch position during an air assault mission in Ghazni Province, Afghanistan, on 21 March 2012.

Photo by SPC Robert Holland



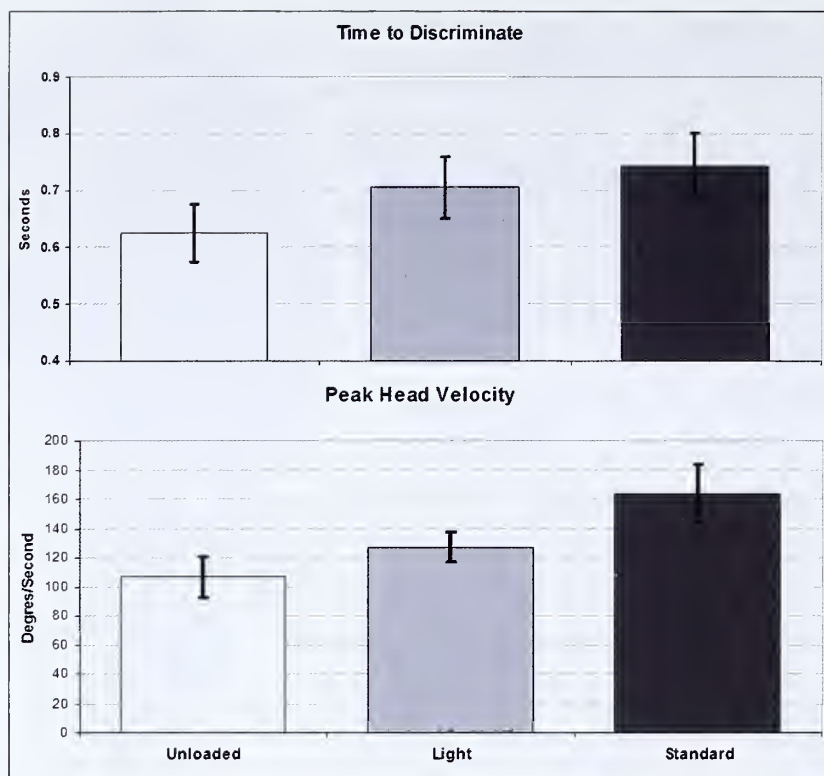


Figure 2 — Time to Discriminate and Peak Head Velocity

since then, which can only make the findings below move in a direction of poorer performance as this will not improve with more weight in any case. All loaded configurations were compared to an unloaded baseline that included the M4 Carbine or a lighter load defined below. The unloaded configuration provides information about the overall degradation in performance “from optimal” as well as a general comparison to a relatively unloaded enemy. There were three primary loads (all with helmet):

1) **Vest** — Ballistic vest with soft inserts, plates and a basic fire load (six magazines, two fragmentation grenades, two 40mm grenades as distributed squad equipment, radio, battery, etc.)

2) **Standard** — Vest condition plus a light assault pack with additional fire load to represent extended patrols, heavier direct action missions, or operations that require any additional kit carried in an assault pack

3) **Light** — Same as the standard load except every piece of equipment was two-thirds the weight of standard

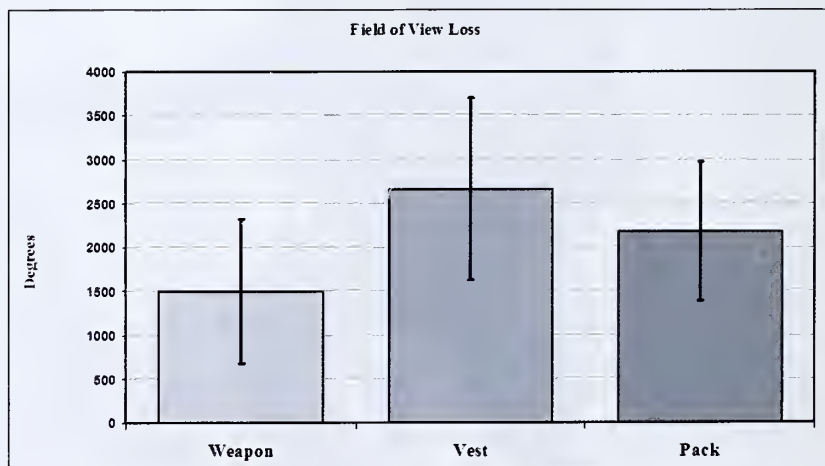
The vest load had the majority of weight on the front (magazines, fragmentation grenades, etc.) and less on the back, making it front heavy. The light load provided an idea of what could be gained with either advanced technology at lighter weight or unloading the warfighter in other ways (e.g. accepting greater risk because of the up-front survivability gained). Two additional smaller loads were added to the standard configuration to understand the impact of loading the head and arms/gun for visual perception and performance (target or threat identification and precision aiming). These two configurations added PVS-7 night vision goggles (NVGs) to the helmet (+1.5 pounds) or upper extremity (UE) armor to the forearms and upper arms in a way that didn’t interfere with range of motion (+4.1 pounds).

Move to Shoot Transition I: Establishing Upright Posture

There are many ways to stop and establish marksmanship postures. In order to keep the type of transition consistent and the effects of load clear, a landing task was used to evaluate the consequences of load on target discrimination, head orientation and field of view (situational awareness), and the adaptability and flexibility of warfighters under different loads to perform transitions after landing (e.g. fire a weapon, change direction, etc.). This task was only meant to generalize the consequences of load on dynamic transitions and specifically get at questions involving how the human controls the weight and distribution when establishing upright posture (as in marksmanship). As weight was increased, it took the warfighters longer to discriminate the highest threat target, and head velocity increased every time the load increased. This provided direct evidence that one of the consequences of load is the delay in threat identification and discrimination (situational awareness) during dynamic movement transitions, which occur all the time in combat. Specifically, this relates to the inability of the human system to control the load when stopping to acquire targets and shoot. This uncontrolled force and shock moves up the body and reaches the head and eyes, disrupting situational awareness.

In addition to the reduction in situational awareness, load also significantly increased the downward head angles during the entire task, which reduced the total field of view for the warfighters (Figure 3). This was the first time that it was shown to occur during transitions to upright postures necessary for marksmanship, and the effect was consistent even when the final upright postures were established. Another important finding was that the vest configuration’s performance was much worse (for downward head angles and field of view loss) than the heavier standard configuration, despite being 23 pounds lighter. This clearly shows that it is not just the weight that has negative effects, but that uneven loading of equipment (front loaded in this case) can be more important to situational awareness and visual performance necessary for survival. The final important measure when transitioning under different loads was the adaptability and flexibility of the warfighters — the ability to rapidly react and move based on the situation at hand. The results

Figure 3 — Field of View Loss



of these measures suggested that the vest and standard configurations were equally constraining for warfighter adaptability, further supporting the idea that all different configurations of load should (within operational realities involving access to crucial equipment) be spread as evenly as possible over the warfighter for optimal adaptability and up-front survivability.

Move to Shoot Transition II: Speed/ Accuracy Trade-offs and Coordination

To understand the consequences of load on speed/ accuracy trade-offs in more realistic terms, two targets were used. One target was immediately in front of the warfighters (forward posture), and the other was an overhead target that was up and to the left of the warfighters (high posture). The high target was added for a more realistic transition, as the forward target required large gun movement but only small trunk and head movements. The high target also provided insight into the constraints of load on more difficult postures for marksmanship, like those in the mountains of Afghanistan or the urban environments in Iraq, adding the challenge of high-angle combat shooting. The simulated target distance used in this task was approximately 65 meters and a confined range target was used. Instructions were to shoot as fast and accurately as possible. **Note:** The accuracy measures in Figure 4 — in millimeters (mm) — are not at the 65-meter distance and provide a relative loss of performance that can be extended to any distance within reason. Higher values indicate less accurate performance (farther from center of target).

Speed and accuracy were both degraded with the addition of load; the smaller extremity loads had significant impacts on lethality, and higher targets further degraded marksmanship accuracy. Specifically, accuracy was reduced by 18.1 percent when UE armor was added and an additional 31.6 percent when NVGs were added to the helmet. Firing latency (time to trigger pull) was increased by about 0.1 seconds with the standard load, and extremity armor added another 0.1 seconds. The NVGs added an additional quarter of a second. When the time to discriminate threats was added to this, warfighters appeared to lose more than a quarter of a second per individual engagement under load and more than half a second when additional weight was added to the helmet or upper extremity. The poor performance in all load

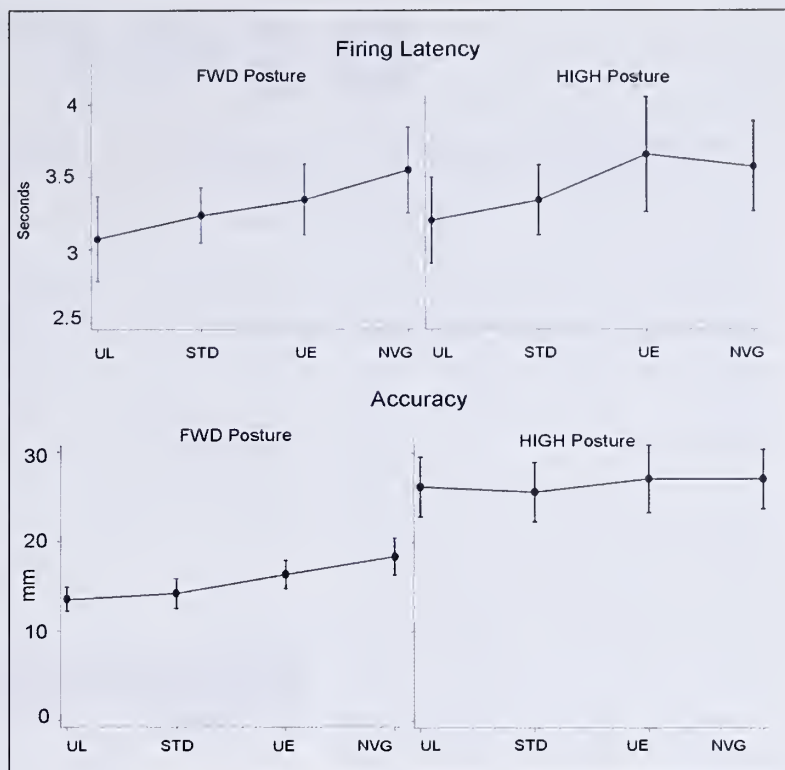


Figure 4 — Firing Latency and Accuracy

configurations at all the high targets is troubling, and it is hard to tell if this is a training issue or simply what happens when very difficult postures have to be established quickly during shoot-and-move dynamics. In a different study, the standard load at the high target condition reduced accuracy by about 40 percent compared to the light and standard loads at the forward target, again showing the consequences of heavier loads on high-angle shooting. The little historical research that has been done on dynamic marksmanship has primarily been in the form of “ready up” drills similar to the forward target condition here. This is a less operationally applicable condition, as in most cases the target is not directly in front of you or is moving. Both of these scenarios require the type of significant postural transitions (head, gun, and trunk) as seen in the high target condition. Research is ongoing to better understand this, as well as the effects of weapons loading on shoot-and-move dynamics that will allow operational decisions on the technology trade-offs when added to the weapon.

The consequences of load on head-trunk-gun coordination reflected the reduction in performance of speed/accuracy, as they showed that the large loads on the trunk significantly degraded coordination of movement from the initial positions to the final marksmanship posture on target. Once this final posture was established, the large loads on the trunk did not degrade fine-aiming performance, but they did not help either. This debunks the myth that additional load may dampen vibration in the system and helps improve accuracy performance in true dynamic marksmanship performance. This may or may not be true in range studies when all the time in the world is available and static postures are easily established; however, it is certainly not true in more dynamic and realistic marksmanship performance. Equally important is the finding that smaller loads on the head and arms significantly disrupted the fine-aiming portion of dynamic marksmanship by further delaying the time it takes to re-acquire the target and fire



Photo by SSG Jason Epperson

A Soldier assigned to the 1st Battalion (Airborne), 501st Infantry Regiment leaps over an obstacle near Gorchek, Afghanistan, on 30 March 2012.

accurately (less than accurately, given the above data). The bottom line on the head-gun-trunk coordination findings is that large loads have negative effects on large transitions and smaller loads have negative effects on fine-aiming performance, both of which are necessary for lethality. This finding shows that in each phase of dynamic marksmanship performance, the weight of the carried items “pull” the head-gun-trunk relations from their optimal performance, resulting in longer time to trigger pull and less accurate performance. This has serious implications for requirements generators as well as for developers of advanced equipment that is placed on either the gun or head (e.g. future concepts of heads-up displays and weapons technology). In case there were any questions that we should not place additional weight on the head (visual system performance for target ID and the fine skill of aiming) or arms/gun, we now have data that substantiates that this “not so common sense” approach significantly reduces the effectiveness of shoot-and-move dynamics.

Summary

This article provides initial but substantial support as to why the Army must look toward “operationalizing” science for the warfighter in its approach to lighten the load (Figure 5 summarizes all findings). This approach gives initial insight and quantifies the effects of equipment technology and employability in the hands of the warfighter, and significantly expands the understanding from only the capabilities of the technology itself. At its heart, this approach can provide insight for operational commanders and senior NCOs about the different configurations and loading of the warfighter during shoot-and-move dynamics. It can also provide specific warfighter key performance parameters (KPPs) relevant to survivability and mission effectiveness that can be traded against technical KPPs currently used in requirement documents before fielding new equipment. These findings are just a beginning but suggest that operationally and scientifically relevant metrics are both necessary to address how to best optimize warfighter lethality, mobility, and situational awareness in combat. The problem of load is not a simple one, and warfighters can’t be seen as machines that must be made stronger to carry more equipment. This approach will surely fail the warfighter in terms of their immediate operational

Pre-Shoot	Measure	Outcome/“So What”
Mobility	Flexibility to Change Posture	Reduced flexibility to change posture during transition to upright stance. Load makes it significantly harder to be “adaptive” to environment. Equal between vest and heavier standard condition, showing the negative consequences of front loading of the torso.
	Field of View Loss	Loss of field of view reduces the ability to pick-up targets and threat information. Greater loss in the lighter but more forward-loaded vest condition.
	Head Orientation	Greatest downward head orientation in the vest configuration, better performance in the standard condition showing the value of equally loading the torso to situational awareness.
Situational Awareness	Time to Discriminate	Reduced with both light and standard configurations, greatest in the standard configuration. Reduced capability to discriminate targets, identify friend vs foe, threats, etc.
Shooting	Measure	Outcome/“So What”
Mobility	Head-Gun-Trunk Coordination	Heavier loads on the torso disrupted postural transitions to final shooting position by “pulling” segments away from their regular coordination.
		Smaller loads on the head and gun further disrupted coordination during fine aiming phase and delayed trigger pull. This delay was extended for high-angle shooting conditions.
Lethality	Firing Latency	All increases to standard loads delayed trigger pull. The light load (~ 55 pounds) did not appear to delay firing. Adding NVGs and upper extremity (UE) armor delayed trigger pull further. High-angle targets increased all delays.
	Accuracy	Accuracy was degraded with the addition of the standard load, and even further by the addition of the NVGs and UE armor. High-angle shooting reduced accuracy further in all conditions.

Figure 5 — Summary of Findings

capability, probability of acute injury, and long-term consequences for permanent disability. The findings show that issues of equipment distribution on the warfighter are as significant as the weight itself, and that weight is not the only consideration for operational “so what” questions. Expansions of current efforts are underway to broaden the current paradigm to “on-the-move threat ID and discrimination” using load weights and configurations that are more current (85-125 pounds). Future efforts will incorporate fatigue effects and communication tasks so that all aspects of “shoot-move-communicate” can be combined for an operationally relevant and scientifically feasible approach.

Christopher Palmer recently completed Army long-term training specifically aimed at finding a better way operationalize shoot-and-move dynamics using the science available in the fields of motor control, biomechanics, and ecological psychology. He is attempting to build an “up-front” survivability model from real warfighter data that is based on the changes in lethality, mobility, and situational awareness that accompany load. This work was partially supported by the Office of Naval Research. Palmer has served as a military performance expert and scientist, operational requirements generator, program manager, and technology developer in the Army, Navy, Marine Corps, and Special Operations Command. He is indebted to the NCOs and junior officers with whom he has served for their mentoring and guidance. He currently serves at the Natick Soldier Research Development and Engineering Command in the Human Sciences and Integrated Systems Division.

BCT 2020

EXPLORING POSSIBLE FUTURE ORGANIZATIONAL DESIGNS

LTC (RETIRED) ROBERT W. LAMONT, U.S. MARINE CORPS

The force structure the Army carries into 2020 will define its vision well into this century. That structure will be shaped by the company-grade officers who walked the streets of Baghdad, who will mature into the field-grade staffs leading the equipment-acquisition and doctrinal-development processes of the Brigade Combat Team (BCT) 2020 structure that takes the field. Like all previous generations, their experiences, good and bad, will greatly influence their decisions and actions as they shape the personnel, material, and doctrine ahead.

Other shaping influences on the Army's force structure will be generated from the first five decades of this century (Table 1), with potential to influence our national character. Thus the force structure of 2020 will result from the training and operational experiences of the post-global war on terrorism generation, who will also face the new peer-competitor strategic landscape in the last half of this century with its associated economic and political challenges.

Since the importance of BCT 2020 force

structure should not be understated as we look ahead, it's therefore timely to explore possible organizational designs for the brigade combat team in the 2020 timeframe. In this article, I'll center not only on the mission, doctrine, and capabilities demanded of the BCT to conduct full-spectrum operations, but I'll also discuss the BCT organizational design's ability to implement maneuver-based defeat mechanisms as a follow-on to initial entry operations in many environments. Finally, I'll discuss the limitations that cost places on organizational changes and the constant dialogue that must occur while the Army prepares to disengage from current operating theaters in a resource-constrained environment.

Full Spectrum Operations Command and Control

In discussing fleet tactics, Navy CAPT Wayne Hughes notes, "Doctrine isn't what is written in the books; it is what warriors believe in and act on."¹ One need only look at Field Manual 3-0, *Operations*, to realize that a decade of conflict has caused the Army to pause and reflect on what

it believes. That reflection includes full-spectrum operations, a subject that now occupies its own chapter in the manual.

This chapter details the interaction between offense, defense, and stability operations. It also sets that interaction against the demands to take initiative and operate at a faster tempo than the enemy to negate his effectiveness relative to the current battlefield situation. Also, it treats non-lethal operations in stability and civil-support environments with the same intensity found in the discussion of more traditional offensive and defensive operations. The Army realized that operating within the local population did not receive full focus when forces trained away from the local community. So, within the context of these full-spectrum operations, what does it mean to control tempo?

To better understand the competitive dynamic of seizing the initiative, a model of the process and interactions between friendly and opposing command-and-control systems is required. The Lawson Command-Control Cycle is introduced in Figure 1 to visualize these processes.²

Table 1— Developmental Influences 2000-2040

	2000	2010	2020	2030	2040
	Combat engagement	Disengagement	BCT 2020	Modernization	Flashpoint
Events	Company-grade personnel gain operational experience Current doctrine expands New technologies are combat tested	Declining deployment tempo Field grade personnel shepherd equipment modernization and organization Economic activity and lack of clear peer threat reduces budget support and industrial base	Structure fielded Training defines operational experience and mindset Future operational concepts defined and equipment requirements detailed	Concepts and requirements developed post-2012 begin to reach force Operational techniques experimented with under 2020 structure reach doctrinal maturity	China surpasses both USA and European Union in gross domestic product* World reaches oil-production tipping point Climate change disrupts food supplies Overpopulation increases all resource demand
Technologies	Unmanned aerial vehicles Command and control networks Satellite communications to lower echelons	Execution of 2012 Army Modernization Strategy: Joint distributed communications, Ground Combat Vehicle, artillery enhancements, air scout upgrades	Robotics Artificial intelligence Autonomous engagement	Defense acquisition and private industry developments	

* From www.photius.com, Photius Coutsoukis, 2010

Actions	Sensing	Controlling	Physical execution
Destroy	Attack it	Attack it	Mobility kill
Disrupt	Jam it – gains range	Jam it – gains time	Barrier employment
Deceive	False targets, chaff	False message traffic	False route, directions
Deny	Avoid sensors	Communications security, information assurance	Barrier and fires
Exploit	Detect enemy	Monitor enemy	Channel movement

Table 2— Command and Control Focal Points and Influence

The Lawson model outlines how C2 information is used from initial input into the planning process through the implementation of force actions in the operating environment. Within the context of full-spectrum operations, the influence of civilian populations is included as part of the environment. BCT sensors collect information on the enemy and environment and process this against their own force data. This provides the commander and his staff situational awareness against which to compare their desired endstate. Any difference between the two becomes the basis for action orders to the blue force. Layered on top of the Lawson Cycle are key focal points for the force designer, such as the counter-reconnaissance battle, shown as the dashed box around the competing sensor functions. The ability to gain positional advantage is captured during the physical execution of the command cycle as the BCT's capabilities are translated from planning into battlefield action and effects. Connecting these two processes are the controlling functions of command, shown as an arrow. Visual, radio and digital communications serve to translate the commander's intent into action.

Table 2 details the actions available to each side to influence these key points within the C2 cycle and gain an advantage in terms of operational or tactical tempo in the process.³ Since we want to be able to gain an advantage over our opponent and seize the initiative, any future force structure must be able to muster these capabilities. By executing the command cycle faster than our enemy, we impose our will on his ability to influence the action; if we can stay ahead in this process, the action they do take will be of limited effectiveness since the operating environment will have changed by the time he is able to conduct his plan.

Joint Context

The discussion within FM 3-0, *Operations*, clarifies that a single large-fix formation cannot support the diverse requirements of full-spectrum operations. Future BCT structures must work in the context of their roles in accomplishing the joint task force's intent. The Army's approach, using modular

force structure, ensures the flexibility of accomplishing a range of missions. It has made the combined arms brigade the main instrument for conducting maneuver-based campaign in a noncontiguous environment.⁴

Figure 2 provides a visualization of the phases and capabilities needed to implement high-end maneuver against a wide range of threats. As depicted, the first phase of our joint campaign is the seizure of a lodgment area by the early-entry force. This may demand a forcible entry by airborne, airmobile, or

amphibious forces. Alternatively, invitation and support from the host nation may characterize early entry. These initial operations secure the area, facilities, and conditions necessary to conduct subsequent decision maneuver ashore.

During the second phase, the BCT 2020 rapidly translates intelligence into actionable maneuver to ensure it retains initiative throughout the operation. With initiative, BCT 2020 causes the enemy to face an expanding array of tactical threats he is unable to counter due to their rapidity, combined-arms nature and recurring positional advantage.

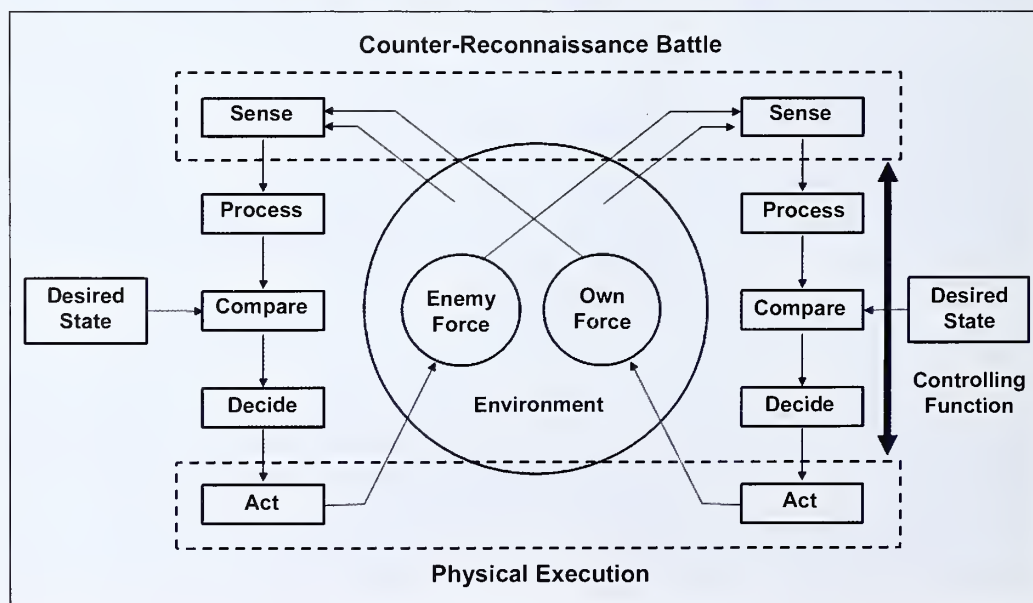
As depicted in Figure 2, for brigades to become the principal tactical unit for conducting maneuver-based operations, they must:

- Be organized to see the battlefield better than their opponent;
- Have the systems to challenge a full range of enemy action; and
- Link these two attributes together with a robust C2 architecture, able to more effectively transition to the command cycle.

BCT Modernization

One of the key constraints in advancing a BCT structure for 2020 is that no additional funding will be available for material solutions. With that in mind, the 2012 Army Modernization Strategy becomes the baseline for proposed capability sets that are available for consideration as we focus on potential brigade organizations. Without getting into the detailed analysis of each

Figure 1— Lawson Command-Control Cycle



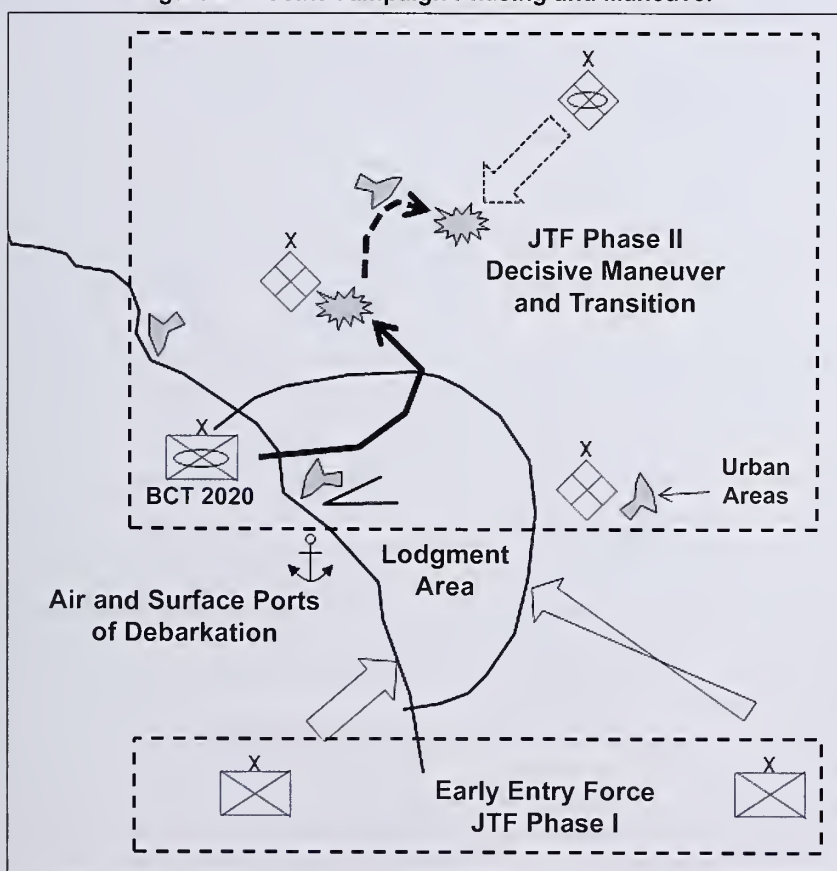
warfighting function's material profile planned for the outyears, the following is highlighted as influencing future brigade designs.

Collectively, the fielding of the Joint Tactical Radio System, Warfighter Information Network-Tactical, Distributed Common Ground System-Army, and Joint Battle Command-Platform will continue to improve the ability of the brigade to function within a joint task force (JTF) and control its own operations across a wide range of battlefield activities. The Kiowa Warrior upgrades will advance the brigade's ability to sense the environment and provide a better armed response when needed. Unmanned vehicles, ground and air, will provide more sensing capabilities to the brigade and allow for lower-risk target acquisition and engagement. Finally, the planned Ground Combat Vehicle modernization will support better mobility and protection for our mounted Infantry as they face an array of tasks across the full spectrum of conflict, which demands "boots on the ground" to successfully engage and bring the mission to closure.⁵

Figure 3 proposes BCT organization for the 2020 timeframe. Most of this structure is familiar to those with a heavy-brigade background. What jumps out as new is the addition of a composite helicopter squadron directly under the control of the brigade. While the interim and final command relationships of this organization are up for discussion, the intent is to provide the brigade direct and responsive aviation support demanded by full-spectrum operations.

The capabilities of such a squadron would allow additional aerial reconnaissance, vertical mobility for both assault and sustainment, and attack options characterized by speed, accuracy and lethality. These are hallmark capabilities required to develop that expanding array of tactical threats needed to seize and retain the initiative and exploit maneuver as a defeat mechanism.

Figure 2 — Joint Campaign Phasing and Maneuver



The influence of such a brigade structure clears during movement beyond the perimeter of the lodgment area. Maneuver options on this perimeter increase at a rate of 3-to-1 for each step the brigade extends the perimeter.⁶ However, if we can expand our thinking away from the limitations associated with a linear representation of the battlefield, the addition of air mobility allows the brigade to strike at any point with range. This opens the maneuver potential exponentially, greatly complicating the threat's ability to focus on a single line of advance. In this way, the combination of airmobile reach and speed compound the hitting power of heavy ground-maneuver units. Enemy actions taken to counter one threat, such as dispersing to cover possible landing sites to his rear, make him vulnerable to the capability set of the other arm of our brigade ground-maneuver triad. This places the enemy on the horns of a dilemma, from which he loses the initiative.

The composite helicopter squadron has the potential to be tailored for each mission and operating area. As a starting point, this organization would include six attack aircraft, six light-lift aircraft, 12 medium-lift aircraft, and six reconnaissance aircraft. Also, the organization provides the operating headquarters for unmanned aerial vehicles. Finally, the headquarters provides the logistic and maintenance support appropriate for this number of aircraft to the squadron.

The other twist to the brigade structure is the addition of a dismounted Infantry battalion. This returns the triangular nature to the brigade structure and extends its ability to operate across the full spectrum of conflict. It is somewhat ironic that operations at the "lower" end of the spectrum of conflict are manpower-intensive to execute, but this is necessary. In short, positive interaction with local populations demands dismounted Infantry for success. Whether walking security patrols, engaging in humanitarian relief or completing civil affairs projects, it is Soldier-to-civilian contact that defines national presence. At the middle and upper end of the spectrum of conflict, this dismounted element adds staying power and security when facing the ever-expanding urban landscape associated with many potential Third World operating environments.

Fielding the proposed communication suite will allow the brigade to combine combat functionality in new ways. Figure 4 provides insight into a few of the possible combinations available under the 2020 charter. The brigade has three functional groupings that provide a framework for cross-coordination and support rather than formal command structures, including:

- A ground maneuver element;
- An aviation combat element; and
- A combat support and combat service support element.

BCT Elements

Cavalry. The cavalry squadron within the ground-maneuver element provides the brigade the ability to conduct economy-of-forces missions during high-intensity operations beyond the lodgment area. It screens open flanks, provides route security, and sets the stage for the three maneuver battalions to engage the enemy on favorable terms. Also, it adds eyes on the

battlefield to collect and pass on the raw information needed to develop the situational awareness required to outmaneuver their opponent. The combat power inherent in the cavalry squadron allows it to fight for intelligence and develop the situation in a manner not achievable by similar organizations that must depend on stealth as their sole mechanism for accomplishing the collection of battlefield information.

Mobility. Since maneuver is a recurring theme around which our BCT 2020 structure is built, it should come as no surprise that mobility would form a key point of discussion as we explore how the various parts of the brigade work together. The dismounted Infantry battalion will use the speed inherent in light and medium helicopter lift to secure chokepoints, block enemy action and control routes, and in so doing, ensure the forward movement of the heavy ground battalions. In other scenarios, trucks will provide their mobility as they follow in close support of the rest of the ground maneuver element.

Engineers. The doctrinal mobility role of the engineer company remains consistent with current practice and is a key capability in the brigade, exploiting maneuver as a defeat mechanism. Augmenting the gap-crossing capability of this organization will have to be explored. This is driven by the fact that drainage patterns historically move from higher elevation inland to the coastal plain, creating potential gaps along any route of lateral expansion from the lodgment area. Fortunately, since the brigade is operating within the context of a JTF, naval units can support some of these gap-crossing requirements when such a capability is demanded in and around the littoral. In some scenarios, more engineer assets may well be demanded given the difficult nature of the operating area or the counter-mobility capability of the enemy.

Communications and command. To see the battlefield, the brigade's enhanced communications and command suite will link all the organization's sensors to provide a unified common operating picture of friendly, enemy, and noncombatant players within the battlespace. Ground maneuver reports, UAV downlinks and reconnaissance helicopters will feed the target-acquisition process as fire-support centers rack and stack targets consistent with

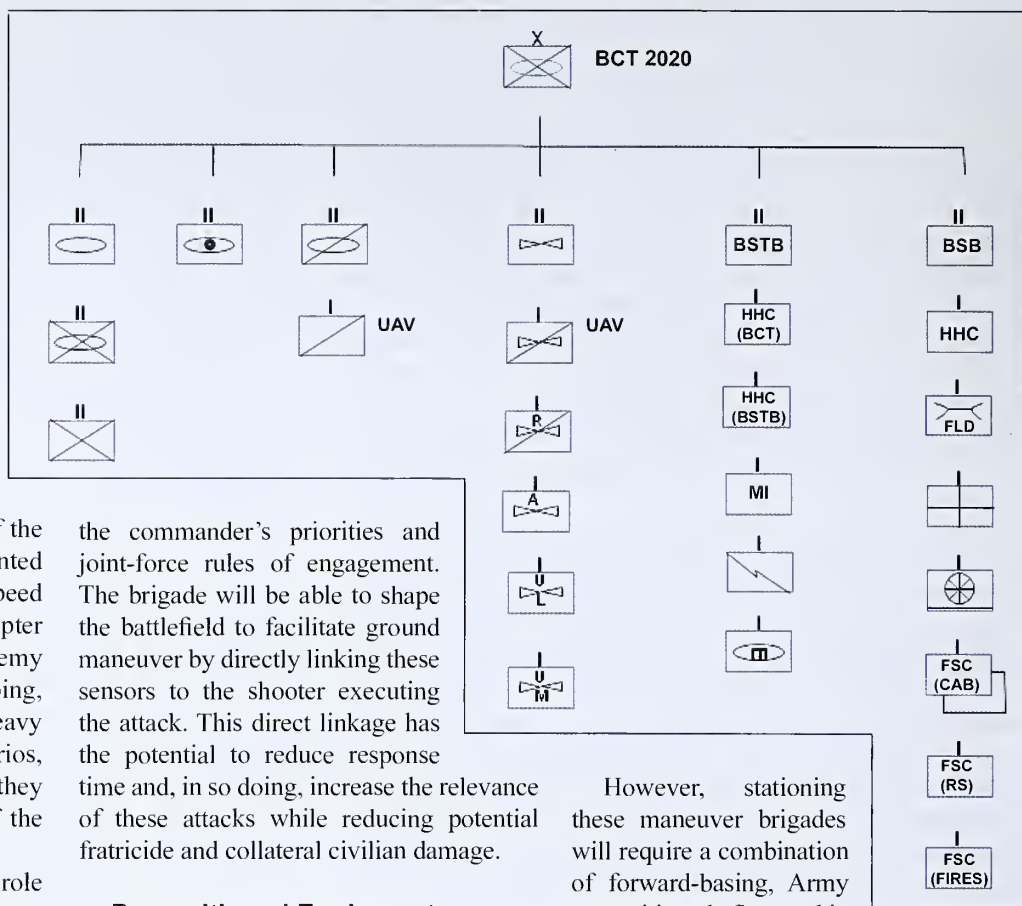
the commander's priorities and joint-force rules of engagement. The brigade will be able to shape the battlefield to facilitate ground maneuver by directly linking these sensors to the shooter executing the attack. This direct linkage has the potential to reduce response time and, in so doing, increase the relevance of these attacks while reducing potential fratricide and collateral civilian damage.

Prepositioned Equipment Support

While these examples of combined combat show the capabilities of the brigade, the same technique can apply to the lower end of the conflict spectrum. During humanitarian operations, medical, transportation and engineer units can combine to move supplies, restore basic services, and provide medical assistance when host-nation services have broken down either due to enemy action or natural disaster.

The helicopter lift greatly extends the range of such operations and provides quick response and support before any rebel or enemy forces can secure popular favor during times of stress. Since helicopter lift can operate independently of the host nation's road network, it provides the brigade's leadership options to counter route-based threats or continue operations in the face of a heavily damaged transportation system. In this scenario, it may well be the combat service support element that is the focus of effort for the brigade. Combat units in this case would operate in a supporting role by providing the security force needed to allow humanitarian operations to proceed unencumbered.

Figure 3 — Proposed BCT 2020 Organization



However, stationing these maneuver brigades will require a combination of forward-basing, Army prepositioned afloat and in the continental U.S. positioning to exploit the shortening strategic timelines of an uncertain world. While forward-basing options may be limited, they represent dramatically shortened air transportation requirements that have potential to reduce the amount of lift demanded for a deployment and the time needed to execute. When this potential combines with the APA equipment sets, the BCT 2020 is able to deploy in a minimum amount of time. The combined operational reach of APA and air deployment offers the best odds of exploiting the strategic surprise resulting from initial entry operations and, in so doing, sets the stage for further maneuver beyond the lodgment area.

Finally, adding this same approach with the extended deployment leg associated with stateside basing provides the same deployment options but at a higher cost in airlift assets. Balancing these modernization options will demand a cross service look at the joint capabilities needs down the line.

Training BCT 2020

While organizational charts provide some insight into future force design, the reality remains for any operational unit: if you can't train it, you can't fight

it. Meeting the Army's standards for brigade-level-and-below training is achievable within the current National Training Center infrastructure. A larger, and in some way more important issue, is whether BCT 2020 can be trained within the context of full-scale JTF employment.

This implies a JTF training location as rigorous in its operating environment and evaluation methodologies as those found at the service level for the Army at Fort Irwin, Calif.; the Air Force at Nellis Air Force Base, Nevada; or the Navy at Corona Naval Surface Warfare Center (NSWC), Calif. As we build new force structures in the 2020 timeframe, they will demand a modernization of the JTF training environment as well. This training environment will require the full instrumentation of the operating forces to establish ground truth as a basis for detailed and rigorous after-action reviews.

Most of the pieces for such a training arena are currently in place. Ground-truth data in terms of time, space, and position are currently captured at the service level for three of the services as indicated above. NSWC Corona has the facilities to pull all this data together and provide near-real-time exercise reconstruction to support the JTF after action review process. By linking the Southern California naval-operating areas with ground and air maneuver space from Irwin, Twentynine Palms, Nellis, Chocolate Mountain and Yuma, the services can build a JTF operating area of enough size, environmental complexity, and diversity to fully challenge any future brigade or JTF force design.

This will continue to increase in importance as the range of sensor and weapon systems expands; the ability to fully exploit their inherent capability will become increasingly difficult as these capabilities outstrip the confines of many current operating areas. The maneuver space afforded the JTF commander on the West Coast is unique and should receive special attention in the resource-constrained moderation that awaits all the services.

Interactive Organizations

The BCT 2020 structure promotes Soldier development by bringing together diverse branch experience while focusing the entire organization on accomplishing a single mission. This structure brings straight-leg Infantry, mechanized Infantry and Armor Soldiers into routine contact with each other to share professional insight and lessons-learned. Aviation capabilities interweave into an operational array as they support maneuver and sustainment operations across the battlefield. The combat multipliers inherent with combat-support and combat-service-support, especially as it applies to the lower end of the spectrum of conflict, are visible across the brigade structure as each organization contributes its role in mission accomplishment. This inherently interactive organization provides a testbed for future operational designs and serves as a proving ground for the development of maneuver Soldiers across the brigade.

In fact, these very interactions in the middle- to late-2020 timeframe will drive future operational concept development and material-requirements definition. This should add importance to the need to field a dynamic brigade structure that explores ground- and air-mobility options within a maneuver-based paradigm as the Army prepares for a range of potential operational scenarios. The ability of a new generation of Soldiers to solve these increasing complex operational problems will be instrumental in our national survival.

Notes

1 CAPT Wayne Hughes Jr., U.S. Navy, *Fleet Tactics, Theory and Practice* (Annapolis, MD: Naval Institute Press, 1986).

2 Ibid.

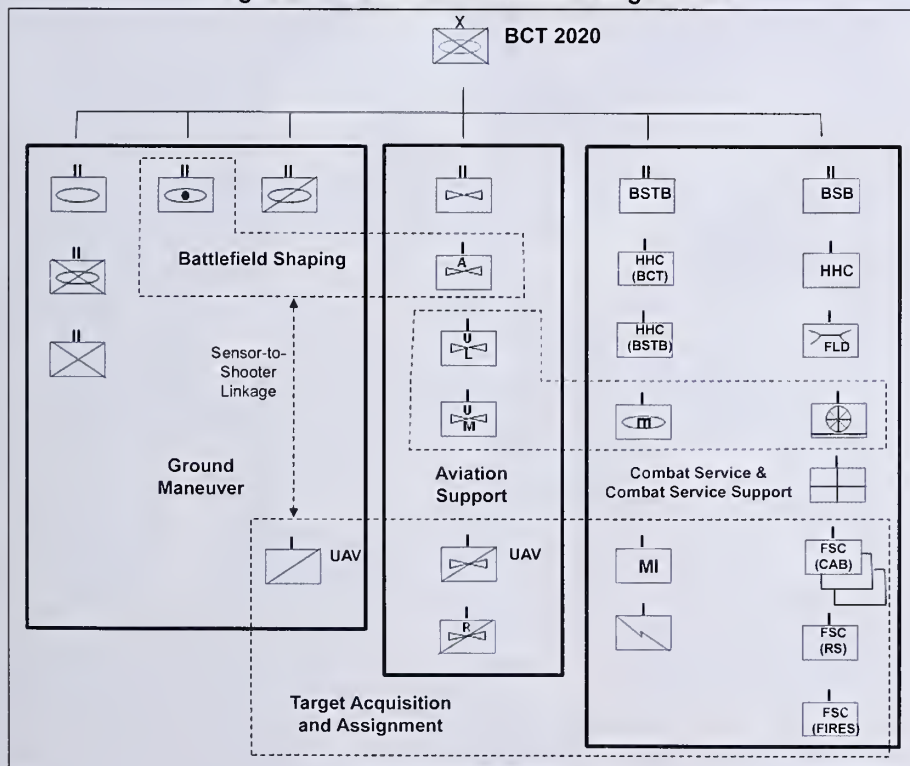
3 Ibid.

4 FM 3-0, *Operations*, Department of the Army, February 2008.

5 Army Modernization Plan 2012, Department of the Army, May 2011.

6 Since π = circumference (C) divided by diameter (D), and we know that the diameter is twice the radius (R), it follows that $C = 2 \cdot R \cdot \pi$. However, we are only interested in the landward side of the circumference, which is the perimeter (P), so divide by 2 and we determine that $P = \pi \cdot R$. Finally, we approximate π as three and somewhat understate the rate at which the linear maneuver space expands.

Figure 4 — Battlefield Functional Alignments



Editor's Note: This article first appeared in the April-June 2012 issue of *ARMOR*.

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During the Mountain Phase, Ranger students begin learning lower mountaineering skills including rappelling (30' tower and 60' rock face) and various knot tying.

Photo by John D. Helms

Training Notes



U.S. ARMY RANGER SCHOOL MOUNTAIN PHASE

5TH RANGER TRAINING BATTALION

The Mountain Phase of Ranger School, overseen by the 5th Ranger Training Battalion in Dahlonaga, Ga., is often regarded as the most difficult phase of Ranger School. Students in the Mountain Phase build upon the squad-level skills developed at Camp Darby and learn the skills required to succeed at the platoon level. These skills are then evaluated in a simulated combat environment designed to apply physical duress to the already mentally taxing course. The cumulative effects of terrain, exhaustion, and increased responsibility at the platoon level make the Mountain Phase a dynamic and demanding environment. Leadership is truly tested as Ranger students execute platoon operations for the first time in the harsh surroundings of the Chattahoochee National Forest.

Upon the completion of military mountaineering training, patrolling instruction, and practical exercises, the students' leadership is evaluated during two graded five-day field training exercises (FTXs) separated by a re-fit and after actions review (AAR) day. Graded positions within each patrol include the platoon leader (PL), platoon sergeant (PSG), three squad leaders (SL), and a weapons squad leader (WSL). A typical patrol will consist of three phases; each phase will have a corresponding platoon leader and platoon sergeant (i.e. PL1, PSG1), while the squad leaders remain for the duration of the 24-hour patrol. The first phase of the patrol is the "Planning and Movement Phase," and the chain of command typically changes out prior to reaching the objective rally point. The second phase is the "Actions on the Objective Phase" where the chain of command (i.e. PL2, PSG2) controls the raid, ambush, or movement to contact but then changes out before stepping off to the nighttime patrol base. The third and final phase of the patrol is "Movement and Patrol Base Operations Phase," where the chain of command (i.e. PL3, PSG3) remains in charge of the patrol throughout the night until they are relieved the next morning. Based on individual performance, Ranger students receive a maximum of three graded leadership positions throughout the 10-day FTX. Historical trends show that approximately 80 percent of Mountain Phase students from any given class will continue to Camp Rudder for the Florida



Photo by John D. Helms

After completing a knot test, Ranger students move on to rope bridge training.

Phase of Ranger School. Of the 20 percent who do not move forward on their first try, more than 90 percent will eventually earn their Ranger tab.

The most common student trends, as cited in senior walker assessments, are the inability to implement the techniques and standard operating procedures (SOPs) learned in training as well as failure to effectively work as a team (leadership failure). Although leadership is the overarching principle evaluated in every Ranger, each position offers its own set of challenges. These challenges are further exacerbated by the fact that while a typical Ranger class is diverse in background and experience, on average, most students have less than five years experience in the Army. This relatively young base of the Ranger student population, combined with the requirements of a dynamic patrol environment, largely explains the difficulties in application of technical skills and leadership in the high-stress simulated combat environment in which the students are evaluated.

Though each similar position (PL1 vs. PL3 or WSL vs. assault SL) has the same number of graded tasks, these tasks vary in



U.S. Army photos

Above, a Ranger student briefs an operation order at a patrol base. At right, students climb Mount Greasy during the field training exercise.

the amount of control and technical knowledge required. For example, an assault squad leader must exercise great control maneuvering his men while a WSL must master machine gun theory (see FM 3-22.68, *Crew-Served Machine Guns*) and direct fire control measures (FM 3-21.8, *The Infantry Rifle Platoon and Squad*). Both positions represent an equal leadership challenge, but they require different levels of control versus technical knowledge. Combine this with the experience of the average student, who has mostly “classroom” experience (i.e. Infantry Basic Officer Leadership Course, Advanced Individual Training, etc.), and the 57 percent go rate for WSL (five percent higher than the three other SL positions) gains context. The same principle applies to the 17 percent difference in the “GO” rate of the PSG1 position versus the PSG2 position, or the six percent difference between PL1 and PL3 success rates. There is a gap between the understanding of the techniques and SOPs of a Ranger platoon and the implementation of those techniques and SOPs in a tough field environment. This gap between knowledge and application, however, is closed through effective peer leadership, teamwork, and practical experience prior to arriving at Ranger School.

Success is a team effort, as proven by the Mountain Phase success trend analysis. PLs and PSGs typically share a grade, regardless of branch or experience. In fact, nearly 75 percent of PL and PSG teams receive the same grade; those who work as a team will usually combine their strengths and mitigate their weaknesses. For instructors, a platoon’s ability to work as a team makes a discernable difference in that platoon’s success rate. Leaders must be able to work with Soldiers throughout the Army and put aside their own experience and SOPs from their home station units. Under the stressful conditions in the Mountain Phase of Ranger School, any personal conflicts with another student will be greatly exaggerated and result in straining relationships within the platoon and hindering success.

The trends and statistics seem daunting at first, but becoming part of the one percent of Ranger-qualified Soldiers in the Army is entirely possible. Preparation is key to success, and with the proper attitude and preparation, the tab is not out of reach for those



with the will to succeed. To prepare for Ranger School, and specifically the Mountain Phase, students must go beyond basic Skill Level 1 tasks. Simply put, students are expected to demonstrate exceptional physical fitness and competence in basic

Infantry skills upon arrival. For a list of these basic skills, visit the Ranger Training Brigade Web site at: <http://www.benning.army.mil/infantry/rtb/> and review the student information link. Future students should assess their current status and develop a plan of action. Keep in mind that Ranger School is a leadership school. Mental and emotional toughness are as essential as physical toughness and will be pushed to the limit in the Mountain Phase. Focus on weaknesses. If students lack experience controlling Infantry elements, they should familiarize themselves with the principles of patrolling and the basics of rifle platoon and squad tactics (specifically react to contact, platoon attack, and ambush). If they lack doctrinal experience, they should practice writing operation orders or fragmentary orders. Leadership is a dynamic skill requiring the utmost in dedication; the resources on the RTB Web site are designed to assist in preparation regardless of past experience. The “Developing Mental Toughness for Ranger School” page can also be found in the student information section of the RTB Web site at <http://www.benning.army.mil/infantry/rtb/StudentInformation.html>. This document can help identify strengths and weaknesses and apply proven developmental techniques to building a Ranger foundation.

Ranger School will challenge all who make the decision to earn their tab. The Mountain Phase will present a unique set of challenges to test the leadership abilities of each potential Ranger. Through effective preparation, prospective students can avoid common pitfalls and join the ranks of Rangers throughout the Army.

The following Soldiers from the 5th Ranger Training Battalion contributed to this article: CPT Jason Bradley, SFC Roger Winchester, CPT Jonathan Batt, SFC George Cruse, SFC Jacey Callahan, SFC David Hunt, and SFC Jeffrey Nail.

DSTS: SYSTEM PROVIDES FLEXIBLE, REALISTIC SQUAD TRAINING

CSM STEVEN W. MCCLAFLIN

The dismounted Infantry squad is at the forefront of modern warfare. Whether the nature of the conflict is symmetric or asymmetric, the squad will close with, overmatch, and destroy the enemy. To do this, the Army owes it to the squad to provide the best training possible. To this end, the Maneuver Center of Excellence (MCoE) is introducing a new powerful training tool — the **Dismounted Soldier Training System (DSTS)**. This system is designed to provide training opportunities to squads regardless of location using a simulated virtual environment that closely replicates a real-world training area or combat situation. In this new era of constrained resources and greater competition for training areas, new methods must be used to greater supplement decreasing opportunities for live field training.

DSTS, with its flexibility, portability, and realistic simulations, will greatly assist commanders in meeting this need.

Training is key to maintaining the lethality, professional development, and battlefield capabilities of the U.S. Army. In order for our Soldiers and leaders to perform at their optimum with each other as well as with their systems and maintain levels of proficiency, countless hours of tough and realistic training are required. Training allows Soldiers of all ranks, positions, and occupational specialties to identify and correct errors not only on an individual level but also on a group or organizational level. The best-trained Soldiers make the best-trained units — these units end up being the ones that dominate the contemporary operating environment.

Soldiers need to be capable of performing at their peak in combat when lives are at stake. To this end, one can never have enough training. Virtual training can provide one solution to the need for high levels of performance maintenance. While not a replacement for the live environment, virtual training has the potential to maximize live training's potential. Virtual training provides leaders rapid repetition, so Soldiers can perfect battle drills, maneuver, and individual movement techniques. Through repetition in the virtual environment, commanders and NCO leadership can focus on training the larger squad picture in the field.

Availability of the DSTS tool will provide commanders the ability to maintain squad and platoon proficiency at a higher level than other current training

Figure 1 — The DSTS system contains the hardware to completely outfit one Infantry squad of nine Soldiers.





Figure 2 — Imagery is displayed in the virtual reality goggles to immerse the Soldier in the environment.

aids provide. Additionally, this system will allow squads to identify and correct errors in a simulated environment that can be altered and repeated as many times as necessary. This repeatability maximizes the amount of iterations squads can perform specific tasks prior to field training, so that by the time these Soldiers are executing live training, they have eliminated their superfluous mistakes. Therefore, squads will gain the most from the live exercise by having properly prepared to the highest possible level of proficiency going into the training event.

The DSTS system contains the hardware to completely outfit one Infantry squad of nine Soldiers. With the equipment on and the Soldiers wirelessly linked into the simulation network, each Soldier in the system will be represented in the scenarios by an avatar that replicates their real-life movements within the simulation. When outfitted, each Soldier would wear:

- **Helmet-mounted display:** The pieces of this display fit onto the Soldier's own combat helmet. This system contains a head tracker, which is comprised of sensors that track the position and movement of the Soldier's head; stereo speaker headset; microphone; and virtual reality (VR) glasses, which display the simulated environment directly into the Soldier's field of vision.

- **Backpack central processing unit (CPU):** This computer — worn as a backpack — controls all the inputs from the other systems and forwards them to the central command stations. This CPU also runs the VR processor and compiles the Soldier's individual position and his position vis-à-vis his teammates.

- **Body position sensors:** In addition to the helmet sensors, movement of the extremities is tracked so the avatars within the scenario will mirror the Soldier's body position (i.e. standing, kneeling, and prone).

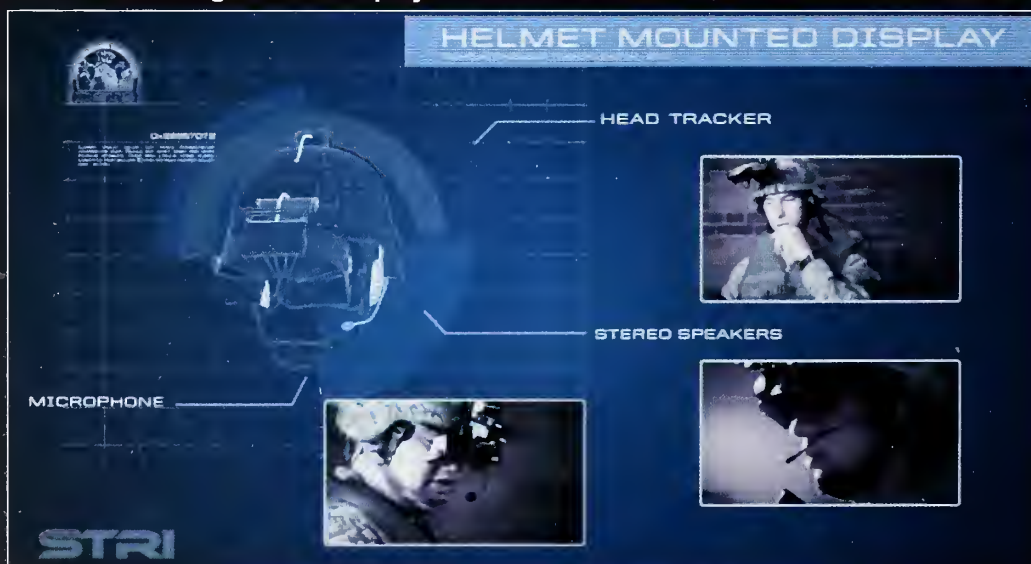
- **Instrumented weapons system:** One of the key advantages of this system is that Soldiers use their own weapons. These weapons are outfitted with sensors to track weapon movement within the system.

Imagery is displayed in the VR goggles to immerse the Soldier in the environment as if he were actually there; the headsets create life-like sounds from the operating environment. Each Soldier can use the microphone to allow for communication between the squad, platoon, and company. This will put each Soldier in the network just as the fielding of Nett Warrior or Rifleman Radio will. The vest and sensors track the body movement of the wearer, causing the avatar in the simulation to mimic the wearer's movements. This allows the Soldier to pie corners and use hand and arm signals.

The DSTS accomplishes life-like training through its creation of virtual scenarios. The training system itself functions as a complete pre-packaged training system in which commanders can select a variety of scenarios from which to train squads. The system allows up to 13 Soldiers to include enablers, as well as the ability to have peer squads and platoon or company leadership oversee and evaluate the training event on the five observation computers. Instead of working through scenarios in a classroom environment or glass house drills, leaders are able to organize a visual immersive environment in which Soldiers can familiarize and refine the use and employment of enablers, interact with simulated local nationals, or engage enemy forces. These missions can all be performed while leaders observe the squad's movement and listen to their communication in real time. Additionally, by allowing squad members to use their own individual weapons, this in turn increases training realism and mitigates the performance gap between simulated and live fire.

One of the most useful tools in the DSTS kit is the system's ability to conduct a dynamic, informative, and thorough after action review (AAR). The AAR computer will track

Figure 3 — Display fits onto Soldier's combat helmet.



and capture real-time data during the training simulation which will allow leaders and other Soldiers to view the Squad's progression within the scenario. Soldiers can use the system's replay options upon completion to observe the actions of themselves, their teammates, and the squad as a whole from multiple first-person perspectives and camera angles. Soldiers and leaders also have the ability during replay to pause or review the scenario in slow motion and make spot corrections. Squads can then make changes to their strategy and conduct the same or a different scenario immediately afterward. Scenarios can become more complex by adding enablers which complicate the situation and assist with training leaders or less complex to allow a squad to perfect the fundamentals.

Soldiers who have had the opportunity to use this device in systems testing have given DSTS positive reviews.

"I think the DSTS is an amazing advancement to our current training technology," said SFC Robert Garvey, a drill sergeant with the 2nd Battalion, 58th Infantry Regiment, 198th Infantry Brigade. "We now have a bridge between the virtual and physical world where we can train Soldiers uninhibited by inclement weather, land availability, and lack of tangible resources (i.e. bullets)."

Garvey, a former squad leader with multiple combat tours, said that the greatest part about the system is the ability to train in any environment without even traveling. "The mind is a powerful thing, and when immersed into a virtual environment where you are still physically walking, running, laying in the prone, and hopping back to a knee or your feet to engage the enemy, it all becomes very real," he said. "That's all we are looking for as leaders in the Army — realistic training. I again emphasize that this cannot and will not replace actual, live field training as the primary focus, but it can and will enhance training, soldier readiness, communication skills, teamwork, and intuitive responses between team/squad members dramatically."



Figure 4 — DSTS should not replace live training, but it should be used to bridge the gap between classroom and live training and ensure leaders and squads gain the most from live training.

As previously stated, the DSTS should not and will not ever replace live training, as virtual training cannot replicate critical elements like heat, inclement weather, and Soldier fatigue. Instead, it should be used as a supplement designed to bridge the gap between classroom and live training and ensure leaders and squads gain the most from live training. The DSTS' ability to create an environment for the Soldiers to reinforce and perfect basic concepts taught in the classroom will allow commanders and NCOs the ability to execute more iterations of live training because of the time and level of detail covered in preparatory simulated training. The advanced AAR system enables Soldiers and leaders to review their actions, critically analyze their performance, and better understand why one form of approach would be superior/inferior to others.

When the entire squad comes together and views each other's actions not only from memory but from a clear recording and then is able to run further iterations, Soldiers and leaders gain the freedom through experimentation and repetition to find the best solutions possible. Truly understanding the pros and cons of varying actions in different

scenarios will lead to the kind of deep understanding that, when combined with muscle memory, leads to highly-trained and proficient squads. DSTS, when combined with classroom and live training, can greatly help fulfill the Army's obligation of ensuring our Soldiers receive the best preparation possible for combat.

At the time this article was written, **CSM Steven W. McClafflin** was serving as the top enlisted Soldier of the U.S. Army Infantry School, Fort Benning, Ga. He enlisted in January 1985 and attended Infantry One Station Unit Training at Fort Benning. During his 26 years of active federal service, CSM McClafflin has held numerous leadership positions to include squad leader, section leader, drill sergeant, ranger instructor, rifle platoon sergeant, scout platoon sergeant, battalion operations sergeant, first sergeant, battalion command sergeant major, brigade command sergeant major, and assumed the duties and responsibilities as the 29th U.S. Army Infantry School command sergeant major on 16 February 2010. CSM McClafflin's assignments include serving with the Multinational Force and Observers in the Sinai Peninsula, Egypt, and Operation Desert Shield/Desert Storm, Saudi Arabia and Iraq respectively, Delta Company, 2nd Battalion, 325th Airborne Infantry Regiment; Operation Enduring Freedom, Afghanistan, Delta Company, 1st Battalion, 505th Parachute Infantry Regiment; Operation Iraqi Freedom II and Operation Iraqi Freedom 06-08, Task Force 1st Battalion, 26th Infantry; and Operation Iraqi Freedom 08-10, 172nd Heavy Brigade Combat Team, Multi National Division-South.

LESSONS FROM OPERATION NEW DAWN

TEACHING TRAINING MANAGEMENT AND CRITICAL MARKSMANSHIP SKILLS TO THE IA

MAJ MARC S. CICHOWICZ

With the decade-long Iraq war over, it seems fitting to pass on our success story of training Iraqi infantry units during the opening days of Operation New Dawn (OND). Team Courage's stability transition team (STT) — assigned to the 3rd Battalion, 29th Field Artillery, 3rd Brigade Combat Team, 4th Infantry Division — supported the creation of the Di-Qar local training area (LTA) in late 2010. The Pacesetters (3-29 FA) were instrumental in synchronizing resources and laying the foundation in building Camp Mittica's life support area (LSA) in partnership with the 10th Iraqi Division.

Minutes outside of the Tallil Airbase (Camp Adder), Di-Qar's LSA and LTA were carved out of the desert and became operational in just a few weeks. United States Forces-Iraq's (USF-I) strategy while conducting stability operations consisted of advise and assist brigades (AABs) partnering with Iraqi infantry divisions. Training consisted of coaching, assessing, and mentoring Iraqi Army (IA) infantry companies and their battalion staffs. Primary emphasis focused on tactical operations, training management systems, and U.S. Infantry doctrine. USF-I's mandated mission essential task list (METL) culminated in platoon maneuver live-fire exercises and company defensive live-fire exercises. The brigade hand selected personnel from across its spectrum of STT advisors for their expertise in training management, Infantry tactics, and IA advisor

capabilities. Special Forces, Infantry, Field Artillery, Armor, and Logistics officers, along with a mechanized Infantry company from the 1st Battalion, 68th Armor Battalion, developed a 19-day program of instruction (POI). This program was known as Tadreeb al-Shamil (TaS), which is Arabic for all-inclusive training, and was the main effort for many AABs during the theater's change of mission to OND.

The intent behind this training regime was to show the IA the importance of training management while building Iraqi confidence in using U.S. Infantry doctrine and weapon systems. Most importantly, the end state of this training program was the "train-the-trainer" methodology. U.S. forces with Iraqi division and regional training center cadre showed them what right looks like. The ultimate objective was to turn over an established, Iraqi-led program. USF-I's goal was for future cycles to be 100 percent Iraqi-led, while the U.S. forces executed the responsible drawdown. A back-to-the-basics approach was used with crawl, walk, and run phases of training ideology used to train the IA on individual warrior skills, battle drills, and marksmanship proficiency on all assigned weapons systems and collective tasks at the squad, platoon, and company levels. FM 7-8 (*Infantry Rifle Platoon and Squad*), FM 7-10 (*The Infantry Rifle Company*), and the *Ranger*

Iraqi instructors teach a basic rifle marksmanship class.

Photos courtesy of author





An Iraqi Soldier loads his PKM machine gun during Phase I of the training.

Handbook were referenced to build this training center's POI. The majority of the Iraqi rifle company's infantrymen were issued the M16A2 assault rifle during the summer of 2010. Soviet-era crew-served weapons and indirect fire mortar systems remained on the unit's modified table of organization and equipment (MTOE). Other priorities were to develop Iraqi officers at the company and battalion levels through mentorship and coaching during the training, with focus on planning, resourcing, and executing training using the eight-step training model.

Additional priorities included having the Iraqi leadership exercise their supply and logistics systems to requisition replacements for unserviceable equipment or acquisition of critical shortages for training. This forced the Iraqi Ground Forces Command (IGFC) to grasp the bottom-up requisition system versus the IA's old centralized top-down driven system of receiving supplies and equipment. The field intensive 19-day POI was broken down into five phases.

Zero Day

This day consisted of an opening ceremony where both Iraqi and U.S. senior leaders viewed and provided opening remarks to the first infantry battalion assembled on the LSAs parade field. An orientation to the training program, LSA,

LTA, and ranges was conducted by the 1-68 Armor training cadre and TaS advisors after the opening ceremony. Each company identified critical equipment shortages through platoon layouts. Companies were then broken down into either day one basic rifle marksmanship (BRM) or individual warrior training in the LTA. The Iraqi headquarters company's mortar section was paired with 1-68 Armor company mortarmen to advance the IA soldiers' skills and proficiency on indirect fire systems. That evening, advisors were invited to the Iraqi battalion commander's tent for a dinner. This first key leader engagement (KLE) was the stepping stone for building lasting relationships between the Iraqi leadership and advisors. Without solid relationships and trust, the U.S. Infantry's fundamentals and doctrinal principles would not be understood or safely used during the two company culminating exercises. These core principles form the basis for fire team, squad, and platoon tactics, battle drills, techniques, and procedures (FM 7-8). Skills required to execute safe maneuver live-fire exercises were stressed on day zero and every day through graduation.

Phase I

Throughout the LTA, stations were constructed in round robin fashion, resembling Expert Infantryman Badge

(EIB) training. This made up the individual warrior tasks the Iraqi infantrymen needed before moving on to fire team and squad training. Stations consisted of communications and SALUTE report; first aid; hand grenades; map reading and land navigation; individual movement techniques; cover, concealment, and fighting positions; and weapons proficiency tasks. BRM with the M16A2, AK-47, and Iraqi machine gun (7.62X54mm, PKM light machine gun & 7.62X39mm, RPK squad automatic weapon) were conducted during this phase. M9 pistol ranges were also held for commanders and battalion staff officers.

Phase II

This phase concentrated on team-building skills and training on basic U.S. Infantry tactics at the fire team, squad, and platoon levels. Training included movement techniques and formations, battle drills, buddy team, fire team, and squad maneuver live-fire exercises (dry, blank, and live iterations).

The rifle companies were shown the fire team concept as their blend of Soviet and British doctrines did not have formations below the squad or section. Communications, teamwork, command and control (mission command), and leader initiative were all stressed throughout this phase. The end state of this phase was to have every Iraqi company trained and proficient up to the squad level in offensive live-fire exercises. These first two phases built the foundation for the remaining phases and culminating events.

Phase III

Platoon and company movement techniques and formations, battle drills, command and control, and offensive and defensive operations were introduced and trained. Platoon deliberate attack with dry and blank runs were conducted until every platoon and platoon leader were proficient and trained on the basics. Company defense U.S. doctrine was introduced and trained. Each rifle company rehearsed and executed priorities of work in the tactical assembly area, and conducted proper company movement formations, reconnaissance, occupation, and building a company defense in the LTA. Training

management and the ability to synchronize training requirements and resources were stressed to the battalion staff and headquarters section. This was accomplished through the rifle company's daily status reports and resource requisitions that were submitted to their respective battalion headquarters sections for staffing and action. TaS advisors also partnered with the battalion staff officers to coach and mentor them on basic training management systems.

Phase IV

Platoon maneuver live-fire exercises were rehearsed and executed until every platoon in the battalion was confident and proficient in conducting safe, coordinated events. Every platoon leader in the battalion successfully occupied their respective assembly areas, conducted leader recons, and moved their support-by-fire sections and assault squads into place prior to executing their respective live-fire exercises. Battalion and company mortars prepped each objective until support-by-fire positions were established to suppress the enemy positions. This allowed the platoon leader and his assault force covering fires to flank and maneuver into their attack positions. Dry, blank, and live-fire methodologies were used to validate each platoon.

Phase V

Company defensive live-fire exercises were the second and last culminating events that marked the end to a successful training program. Each company rotated through dry and blank fire rehearsals for validation prior to the live-fire exercise. Battalion and company mortars supported each defensive live-fire event. Graduation day followed the company defensive live-fire exercise, and U.S. and Iraqi senior leaders addressed the battalion formation assembled on the LSA parade field. Following the ceremony, gifts were exchanged between the 1-68 Armor cadre, advisors, and their Iraqi counterparts.

Lessons Learned

Challenges that had to be dealt with and overcome with our Iraqi partners included weather, language and culture, linguist regional dialects, Iraqi supply systems, new U.S. weapon systems and doctrine, compressed timelines, and real-world missions due to regional security requirements. A back-to-basics approach was utilized to teach U.S. Infantry tactics, while stressing weapons safety and marksmanship fundamentals throughout the course. In three days, we transitioned Soldiers who may have fired their AK-47s once in basic training into proficient, confident, and safe infantrymen handling their new M16A2 rifles. Although it took us a while to figure out, we discovered during our first battalion rotation that Iraqi instructors do a far better job of training U.S. principles and fundamentals to their soldiers. Once the Iraqi training cadre was

trained and confident on the podium, training events and timelines improved dramatically. Like any other training regime, our second rotation ran much more smoothly. Every Iraqi and U.S. senior leader came through our LTA (combatant, IGFC, corps, and division commanders), but this actually enabled the Iraqi infantrymen's learning curves to be breached and overcome faster. These senior leaders reinforced why this training was important and relevant to growing their Army's capabilities and securing their country from internal and external threats. We have all been fighting the counterinsurgency fight and conducting stability operations for the last decade. This return to major combat operations is a perishable skill for both armies.

After two rotations and more than 250,000 rounds fired, two 10th Iraqi Division battalions were successfully trained on conducting full spectrum operations. Their operational readiness was also drastically increased. As field grade officers, this training mission was extremely rewarding as our team was able to coach, mentor, and train Iraqi infantrymen in a field environment with live ammunition. Lasting relationships were formed as well as a camaraderie that could only be experienced through actual combat. We learned from the IA just as much as they learned from us.

Finally, the Iraqi people have a new and modernized military and political system to work out. The Iraqi military will continue to be the continuity and professional organization that keeps it all together until their national government matures and becomes more efficient at nation building. The Iraqi Army will contribute immensely to their country becoming a stable world player.

MAJ Marc S. Cichowicz is currently a student at the Command and General Staff College in Fort Leavenworth, Kan. He is a former enlisted airborne Infantryman and Infantry officer with 21 years of service. His combat tours include four deployments to the Middle East and two peacekeeping operations in the Balkans as a logistics officer. MAJ Cichowicz has earned the President's Hundred Tab, Distinguished Rifleman Badge, and a National Trophy Medal in service rifle competition. He is also sniper qualified and earned his commission through ROTC.



An Iraqi Army platoon leader leads a live-fire assault.

WARRIOR ATHLETIC TRAINING

UNEXPECTED BENEFITS OF ARMY-UNIVERSITY COLLABORATIONS

AMANDA PIZZI
JOELLEN SEFTON, PH.D

It's 5:15 a.m. in a converted classroom at the 2nd Battalion, 54th Infantry Regiment on Sand Hill at Fort Benning, Ga. Returning Initial Entry Training (IET) Soldiers sign in and get to work on their prescribed rehabilitation and cardiovascular exercises, while new patients report to the Warrior Athletic Training (WAT) program athletic trainer for injury evaluation. A second athletic trainer is out on the training field watching the ability group run and looking for trainees who are limping or have other injuries. Afterwards, a trainer prepares a report for the command that documents every injury, treatment plan, and when each trainee is expected to return to full duty, while another WAT athletic trainer briefs a new company on injury prevention and self care.

Three years ago, the 2nd Battalion, 54th Infantry Regiment at Fort Benning entered into discussions with the Department of Kinesiology's Graduate Athletic Training Program at Auburn University in an effort to reduce the number of training injuries occurring during One Station Unit Training (OSUT). Prompted by the Army's Soldier Athlete Initiative, the result has been the WAT program — an alliance between the university and the training brigades on Sand Hill that

is benefiting both groups in many unexpected ways.

The U.S. Army is first and foremost a learning organization, constantly seeking ways to become more effective and efficient. Increasing constraints in time and funding combined with a national shift towards a less athletically capable population is forcing an Army-wide cultural change with respect to how we train our Soldiers. The design of the WAT program encourages this. It pairs cadre with the WAT team to solve problems, fostering adaptive leaders better able to meet the mission in the face of the ever-changing health of our population. The program also encourages a proactive rather than a reactive approach to readiness and injury reduction and promotes improved education, thus producing a net benefit of teaching personal responsibility with respect to personal readiness.

"As an Infantry OSUT battalion commander with a small battalion staff, it is often a challenge to accomplish the many missions that we are given," said LTC Lance Oskey, commander of 2-54 Infantry. "However, the most important and fundamental mission of training the next Infantry Soldier is greatly assisted by the partnership between the Auburn athletic trainers and the Army."

LTC Oskey called the program a true combat multiplier. He said, "This dedicated team has absolutely increased the effectiveness and efficiency of our mission by providing timely, unique assistance in an area that has a tremendous need — specialized care and treatment of our trainees so they can resume their physically demanding training mission."

The WAT program is designed to provide critical user level support right in the battalions rather than more general support. This cultivates daily open communication and interaction, which fosters a team approach with the WAT athletic trainers working proactively with the drill sergeants at ground level producing immediate gains. This approach works to treat the main problem (proactively identifying a muscle imbalance) rather than treating the symptom (resulting injury). When injuries do occur, the WAT sports medicine space and gym provide a full treatment and rehabilitation facility



Photos courtesy of authors

An athletic trainer from Auburn University assesses an Initial Entry Training Soldier's injury.

right in each battalion. Trainees and cadre never have to leave the battalion for evaluation or treatment except for more serious injuries that require imaging or physical therapy assistance. The WAT program works closely with the Army medical team to insure proper care and coverage. This optimizes important assets and opens up the physical therapy clinic to deal with those Soldiers that really need their care. The final outcome is improved readiness through cost savings, decreased injuries, improved lifelong health and fitness, and ideally, fewer chronic injuries as the trainees become our senior cadre. Protecting our future cadre in this way is especially important with chronic musculoskeletal injuries being a major concern Army-wide.

The WAT program has expanded to provide an exchange of expertise in teaching and learning, resistance training, cardiovascular health and disease, directed research for the training brigades, unique student learning opportunities, and countless other areas where both institutions can benefit from each other's talents and experience. The expansion of the program has also resulted in the development of the Warrior Research Center on Auburn University's main campus.

The WAT program's number one goal is to keep the trainees in training. To do this the WAT athletic trainers provide injury care to help speed healing and speed return to full duty. Often the trainees return to training in better physical shape than when they became injured. In the process, the Soldiers and cadre learn how to take better care of themselves and their injuries, improve physical fitness, and learn ways to prevent future injury or long-term overuse injuries that plague career Soldiers. In its third year, the WAT program has saved 80,000-100,000 hours of lost training time each year, along with untold hours of cadre time and money saved by eliminating the need to transport and accompany Soldiers to medical appointments. It has saved an estimated \$750,000 to 1 million each year by having the athletic trainers treat trainees in the battalion and demonstrated decreases in injuries — especially serious injuries like stress fractures. Trend analysis indicates that injuries are now often caught before they become serious. This enables immediate treatment, faster return to duty, and lower overall costs. Embedded in the battalions, the athletic trainers are considered a valuable part of the training team. They assist in trainee education, correct form during physical training, analyze run gait in an effort to prevent injury and improve efficiency, develop remedial physical training programs, provide medical coverage of high-risk events, and conduct research on injury prevention.

The sports medicine, research, and educational collaboration enables trainees to treat or rehabilitate injuries during physical training hours and in time for chow, without missing important training. This savings in lost training time is noted often by cadre as one the most important aspects of the program.

"It wasn't too hard to determine that Auburn would be a valuable asset for us," said LTC Todd Burkhardt, 2-54's executive officer in charge of the initial program development. "For this type of program to be successful, it had to be coupled with a major university that



Athletic trainers from Auburn University complete exercises with cadre from the 2nd Battalion, 54th Infantry Regiment on Sand Hill.

could provide direction and oversight, that had the resources in terms of manpower, but also the expertise — which you're not going to find with adhoc athletic trainers from a hospital or private practice."

The athletic trainers in the WAT program are certified athletic trainers (ATCs) returning for a rigorous, research-based master's degree in exercise science at Auburn's Department of Kinesiology. As subject matter experts in injury prevention, treatment, rehabilitation and fitness, they team with the drill sergeants to uncover potential causes of injury. They learn physical readiness training (PRT) exercises from the Army's best and then provide an extra set of eyes on the field to spot injuries before they happen. This team approach has clearly been the most successful way to develop effective and well-utilized intervention programs.

"People and relationships are what truly make organizations great. The individual athletic trainers are what have made the unique relationship between Auburn and the U.S. Army successful," said LTC Oskey. "... the trainers are true professionals who possess a unique set of skills that help train our Soldiers, but they also demonstrate a similar dedication to the same values that we train in our Soldiers. From long work hours, to willingness to provide extra assistance for specific training events, to providing individual briefings and assistance to our cadre, the ATC's personal devotion to the mission and the Soldiers and cadre is simply outstanding."

Amanda Pizzi is a certified athletic trainer and certified strength and conditioning specialist. She is currently a Warrior Athletic Training (WAT) program graduate assistant.

JoEllen Sefton, Ph.D., is a certified athletic trainer and certified massage therapist. She is currently serving as the director of the WAT program and Auburn University Warrior Research Center.

WAT: FROM AN ATC's PERSPECTIVE

AMANDA PIZZI

Amanda Pizzi, a certified athletic trainer (ATC) and certified strength and conditioning specialist, is assigned to the 2nd Battalion, 54th Infantry Regiment. Now in her second year of the program, she has encountered many challenges and successes during her time with the Warrior Athletic Training (WAT) program. Her viewpoint offers many unexpected benefits the ATCs have gained from working in this unique environment.

Auburn University graduate students who participate in the WAT program are traditional graduate assistants with a not so traditional job. In short, we keep our Soldiers on their feet and help them successfully complete their training. We also spend a lot of time educating new trainees and cadre on fitness, injury prevention, and rehabilitation. Our team of 10 graduate assistants, a clinical coordinator, and program director help Soldiers of five battalions on Fort Benning to remain healthy during times of extreme physical activity. Our goal is to not only help them now but to also aid in their long-term physical resiliency and help them stay healthy throughout their time in the service. By the time we get to our early afternoon classes, we have already been up for 10 hours, evaluated, treated, and rehabilitated trainees, completed injury paperwork, and witnessed a part of the American society that not many civilians are fortunate enough to see.

Working at 2-54 Infantry has provided a unique and fast-paced working environment with daily situations that force us to think critically on our feet and work effectively and efficiently under pressure. Every day provides different challenges, but I will never forget one day that changed my outlook on life. I was called over to a trainee who had fallen out of a warm-up run on the track to find that he was not breathing and had no heartbeat. Other cadre and I quickly began CPR and notified emergency services. As a team we resuscitated the young Soldier, and he survived. During the event I did as I was

I did not expect to learn so many life lessons, and am so honored to be able to listen to stories from true American heroes and share a piece of the Army lifestyle with the civilian world.

trained to do, but the hours afterward had me thinking about life in a whole new way. That night, when I had time to digest the events of that day, it occurred to me that much of the training on Sand Hill is designed to help our Soldiers in combat situations to react quickly and to make split second decisions. Their training must take over in those first brief seconds of combat. While my job is certainly not comparable to combat, the training I received at Otterbein University in Ohio and now at Auburn University is designed to do the same thing. Athletic trainers, whether at a high school football game responding to neck injury or on the training ground where a heart stops beating, are trained to react quickly and decisively and to let our years of training take over for a few precious minutes.

When I first joined this program, I was eager to share my knowledge of health and fitness with Soldiers, to rehabilitate injuries, and to provide emergency care. I am grateful for the rare experience to be an athletic trainer for the U.S. Army. There are times when trainees come to us in their graduation attire and thank us for helping them complete their training and go on to serve their country proudly. Working together with the cadre, we have helped trainees learn how to care for themselves, the difference between pain that will subside and a real injury in the making, and concepts of nutrition and fitness that will serve them throughout their careers and beyond. Moments like these are constant reminders of why athletic trainers continue to do their jobs after sometimes long frustrating and challenging days. I did not expect to learn so many life lessons, and am so honored to be able to listen to

stories from true American heroes and share a piece of the Army lifestyle with the civilian world.

Now, in the last term of my master's degree at Auburn University, my WAT teammates and I are reflecting on the valuable lessons we have learned from the Army that we now carry over into everyday life. We have learned the true meaning of the word "discipline" from observing our trainees and cadre; juggling classes, research, and our WAT responsibilities; and getting up at 2:30 a.m. daily to perform our duties. We are dedicated to our joint success rather than our individual success, hold ourselves accountable for our decisions, and maintain a high level of integrity. We have learned to perform at a high level of skill and professionalism so as not to let down our teammates and our Soldiers. Whether we are in the lab at Auburn working on research, watching the Auburn Tigers play on Saturday, or studying for a test, we have learned the value of having a battle buddy and make sure we have one with us to keep us on track.

The commander, cadre, and Soldiers of 2-54 Infantry have served as role models, demonstrating how early morning workouts, extra studying, and organization are all factors that help to perfect the American Soldier. The Soldiers' Army Physical Fitness Test scores are testament to the effort and hard work put in by the trainees during daily physical training. Drill sergeants spend countless hours teaching the trainees about discipline and exemplifying how it and hard work can transform someone into a Soldier.

My grandfather, COL Joseph Pizzi, served as a U.S. Army Infantryman for 41 years. Eight of those years were in combat in WWII, Korea, and Vietnam. He was fond of saying no battle is won until there is a Soldier with a rifle at the top of a hill. I came to Fort Benning to learn how to be a better athletic trainer, and I believe that mission is accomplished. More importantly, I learned much about life, honor, and the spirit of the American Soldier.

CONGRESSIONAL FELLOWSHIP PROGRAM OFFERS UNIQUE OPPORTUNITIES

MAJ TIM MEADORS



After completing company command and three deployments to Iraq, my post-command options seemed limited. Nothing could ever compare to leading troops in combat or the tremendous responsibilities given to captains, junior majors, and senior NCOs in today's high operational tempo (OPTEMPO). Admittedly, I became accustomed to operating with very little guidance from my chain of command. They trusted my judgment and gave me the latitude and autonomy to accomplish a mission. However, once I re-deployed, I wondered if I could find an assignment that was as challenging and rewarding as command.

Fortunately, I read a military personnel (MILPER) message announcing the Army Congressional Fellowship Program. The message grabbed my interest. I learned the fellowship is managed by the Office of the Chief Legislative Liaison (OCLL) and includes a three-phase assignment that targets senior captains, junior majors, senior NCOs, and Department of the Army (DA) Civilians (GS 11-14).

After being selected for the fellowship, I moved to the Washington, D.C. area and began the first phase which focused on earning a master's degree from George Washington University. It also included a DA orientation. The briefings were from senior members of the Army staff and provided vital information to help me better understand the Army from the operational and strategic level. The master's degree is designed to make students experts on the legislative process.

The second phase of the fellowship placed me in a congressional office where I worked as a staff member for a member of Congress. I soon learned that Army fellows have a great reputation on Capitol Hill. For an entire year, I saw and contributed to the inner workings of Congress. I

primarily focused on defense- and veteran-related issues, but my portfolio also included issue areas outside of defense. I worked directly for and interacted with my assigned members of Congress for the duration of the year.

The final phase of my fellowship is a two-year utilization tour in a congressionally related position on the Army Staff. I, like most fellows, am assigned to a position in OCLL. The office is the Army's primary point of contact with Capitol Hill and regularly provides Congress with information to ensure it understands the Army's needs. My current job is extremely challenging and provides me multiple opportunities to use the academics from George Washington and my experiences on Capitol Hill. Throughout the utilization assignment, Army fellows are an integral component of the effort to tell the Army's story and convey the Army's needs to those charged by the Constitution to

resource and oversee the Army.

During his farewell address to cadets at West Point, former Secretary of Defense Robert Gates said, "The Army has always needed entrepreneurial leaders with a broad perspective and a diverse range of skills ... in addition to the essential troop command and staff assignments, you should look for opportunities ... (that) might include...being a congressional fellow." The fellowship provides multiple opportunities for adaptive and versatile leaders to assess a situation and find solutions. Each day is a challenge.

Nothing will ever compare to leading Soldiers in combat. However, the fellowship offered me a very unique experience at the highest level of our nation's government that proved professionally and personally satisfying. I now understand the importance of the relationship between Congress and the Army. If you see yourself as an entrepreneurial leader, would like to broaden your perspective, and want a unique position to see your nation at work, the congressional fellowship is an opportunity you should not ignore. Regardless of your branch, academic background, or key development assignments, the fellowship is a great opportunity. For more information, visit the OCLL Web site at <http://ocll.hqda.pentagon.mil> or contact your branch manager. Also, monitor HRC's Web site for the MILPER message announcing the FY 2015 Army Congressional Fellowship requirements.

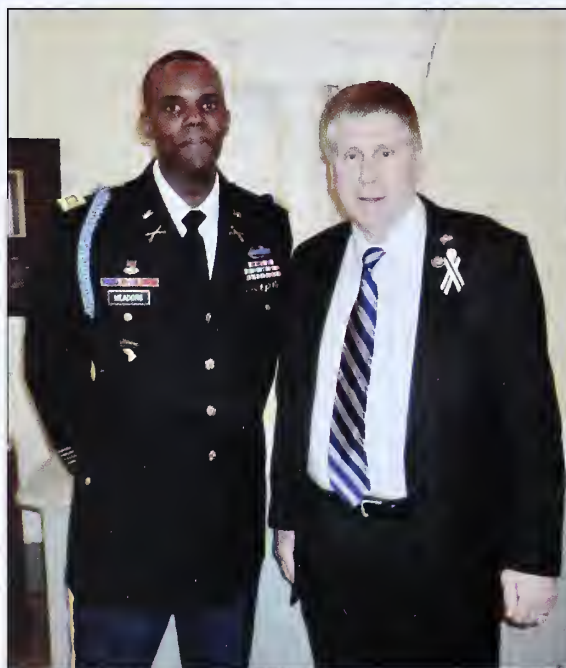


Photo courtesy of author

MAJ Tim Meadors stands next to Congressman Larry Kissell from North Carolina in the U.S. Capitol. Meadors served as an Army Congressional Fellow on Kissell's staff from January to December 2010.

MAJ Tim Meadors was selected for the FY 2010 cohort of Army congressional fellows. He is now in the second year of his two-year utilization and was chosen to serve as the program manager for the fellowship. MAJ Meadors' previous assignments include serving with the 4th Infantry Division and the 101st Airborne Division (Air Assault).

Book Reviews



***Joker One: A Marine Platoon's Story of Courage, Leadership, and Brotherhood.* By Donovan Campbell. New York: Random House, 2009, 336 pages, \$16.**

Reviewed by Patience Brooks.

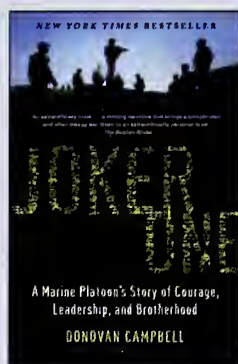
Joker One is a stunningly told narrative. The story beautifully chronicles a detailed account of war, loyalty, and the immeasurable reaches of the human heart. Written by then Marine Corps 1LT Donovan Campbell, the book explores the experiences that he and his platoon endured while deployed to Ramadi, Iraq, in 2004. Even before Campbell and his platoon arrived in Ramadi, he was worried they lacked the confidence of a well-trained and focused platoon, as they were constantly receiving new recruits who had limited combat experience, if any.

Upon arrival, their concerns were quickly outweighed by the immediate need to stay alive, as the scarce spread of Marines soon found themselves in daily battles against particularly well-armed insurgents. Just as Ramadi was on the verge of being a victim of spreading insurgencies from the Al-Anbar province and the city of Fallujah, Donovan and his platoon prevented Ramadi from falling into this archaic slump.

As the platoon leader, Campbell focused on what he knew would be his greatest contribution to bring his platoon reasonable success, which was to analyze the resistance of Iraq and stay on a concentrated path of leadership. A talented writer, Campbell uses clear, relatable language that paints a vivid picture of the struggles and preparations of assembling a platoon for battle. Campbell makes clear his worries about sending a newly composed platoon of 40 into Iraq, of which he only had four short months to prepare them. Campbell tells his story with a fond hand and an honest voice, which makes for an intriguing read.

Ironically enough, Campbell was not always gung ho for the military. He attended Marine Corps Officer Candidate School to enhance his resume rather than carry on a family tradition or out of patriotic pride. A powerful revelation surfaced in his senior year when he realized how little Fortune 500 recruiting companies meant to him. As they and post-graduation salaries "lost their luster," Campbell had a strong need to give back to his country, as he felt his country has already given so much to him. After pondering ways to do it, he decided he wanted to be a part of something bigger than himself. This prompted him to join the United States military, where he knew he would be making the right kind of difference to give back to the country that he felt had been so fortunate to him.

Campbell achieved his most satisfactory position when he joined the 2nd Battalion, 4th Marine Regiment. His detailed account of leading his men into battle takes the reader into the



emotional challenges of being away from home and family for many months at a time and the disorienting feeling upon arrival back in the states, as well as the mixed feeling of push and pull when deployed again. While the story focuses on Campbell's relationships with the people around him, the heart of the story focuses on his own thoughts, beliefs, and actions to become a better leader that his men could be proud to follow and serve with. *Joker One* is a story that can be read by anyone who aspires to learn about how Soldiers really operate in battle in the midst of unbearable tragedy and danger and belongs on the shelves of all who honor and respect the ultimate sacrifices that our brave Soldiers contribute to defending this great nation.

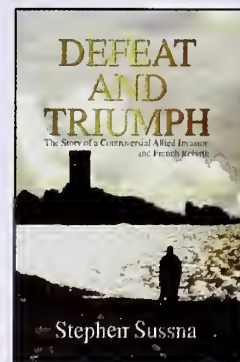
***Defeat and Triumph: The Story of a Controversial Allied Invasion and French Rebirth.* By Stephen Sussna. Bloomington, IN: Xlibris Corporation, 2008, 719 pages (notes, appendices, bibliography, maps, photographs), \$24.64.**

Reviewed by Russell A. Eno.

This is a superbly researched account of the background, events, and consequences of the invasion of France's Mediterranean coast in the autumn of 1944, at a time when the Allies had opened the second front which Soviet Premier Josef Stalin had long sought against Axis forces. Even as the Wehrmacht marshaled its units to react to the Allies' successful D-Day landings in France, they had to contend with airborne and amphibious landings in the expanse of coastline extending from Marseilles to Toulon to Nice, an area which encompasses the French Riviera.

The Allied invasion of southern France on 15 August 1944 — initially code named Operation Anvil to complement Operation Sledgehammer, the planned invasion of Normandy — was later renamed Operation Dragoon just as Operation Sledgehammer was to be re-designated Operation Overlord. Although certainly not intentionally, this was to later preclude confusion with British security forces' military control of Kenya — also named Operation Anvil — during the Mau Mau rebellion beginning in 1954, and with the U.S. series of 21 nuclear tests of the same name in the early 1980s. Regardless of the naming and the timing of Operation Anvil/Dragoon, this superbly planned and executed amphibious undertaking demonstrated the U.S. Navy's facility for force projection, something demonstrated throughout World War II and later in the Inchon landing in Korea, although this has been less credited than it deserved in other published histories.

Dr. Sussna has discussed the invasion of the French Mediterranean coast at the strategic, operational, and tactical levels,



including the controversy over whether the invasion should have been undertaken at all. The British opposed the landing, feeling that it would divert resources from the main effort at Normandy — a reasonable concern. The French were in favor of it, not only because of the damage it could inflict on the German occupying forces, but also because of the morale boost it would give the beleaguered French who had suffered under the Vichy government. President Franklin Roosevelt and GEN Dwight D. Eisenhower were adamant and ultimately prevailed in their conviction that opening a new front in southern France would not only provide the much-needed deep water ports to the south, but also force German units to fight in yet another direction, thus preventing them from shifting forces north to reinforce Wehrmacht divisions opposing the Normandy landings.

Most accounts of amphibious landings in World War II have focused on U.S. Marine Corps (USMC) operations in the Pacific Theater, and rightly so, for the Marines' tenacity, initiative, and valor against the Imperial Japanese forces have earned them their place in history. Largely unnoticed, however, is the fact that the U.S. Army conducted more amphibious landings than the Marines in the war. Naval contributions to the ultimate victory in the context of joint operations are acknowledged in accounts of the monumental undertaking that comprised the D-Day landings of 6 June 1944, and now Dr. Sussna's book describes the roles of the naval forces that made possible a virtually flawless insertion of American and French ground forces into German-occupied France. And that is what makes Sussna's book both unusual and valuable, for he addresses the naval component of the landing forces in detail, and specifically the role of the landing ship, tank (LST). A typical LST boasted a crew of approximately 100 sailors, and the order of battle for Operation Dragoon lists Task Forces 84, 85, and 87 which comprised a total of approximately 77 such LSTs. And it was a young man named Stephen Sussna who served in the heat of the action as a helmsman aboard LST 1012.

Defeat and Triumph is not merely one man's memoir of his wartime experience, based upon recollections possibly filtered by the passage of time — his accounts of his own actions are buried in the reference material at the end of the book — but is instead an exhaustively researched and substantiated account of the operation which helped turn the tide of the war in Europe. The author has drawn from unpublished interviews, maps, good balanced data collection from diaries of Allied and Axis personnel alike, and charts and tables that supplement the narrative. As the editor of the U.S. Infantry's branch magazine, I particularly welcomed Dr. Sussna's use of detailed, clearly drawn maps to support the text. In the many wartime memoirs that come across my desk each year, the single greatest failing is the lack of maps, and I can assure you that *Defeat and Triumph* has no such shortcoming.

Defeat and Triumph: The Story of a Controversial Allied Invasion and French Rebirth is a treasure, as much for its exhaustive research, appendices, and bibliography as for its detailed, masterful narrative of a superbly planned, supported, and executed amphibious landing in enemy-held territory. Buy it, read it, and share it with those who have a genuine interest in military history. It is that good!

***Nothing Less Than War: A New History of America's Entry into World War I.* By Justus D. Doenecke. Lexington, KY: The University of Kentucky Press, 2011, 416 pages, \$40.**

Reviewed by BG (Retired) Curtis H. O'Sullivan

This book was published close to the 95th anniversary of our entry into World War I, but the factors that influenced that action are still pertinent today, so this is more than ancient history. It covers the public and private papers of President Woodrow Wilson and his advisors and the complex interaction of the administration and Congress. Public opinion was a major player then, but it was formed then on issues different from those that divide us now.

The book helps us understand how we went from being “too proud to fight” to the decisive force that ended the war 11 November 1918. When it started, there was no desire or expectation that the U.S. would become involved. Rather, our traditional neutrality seemed the best course of action and was favored by most of the people, though a fair number has inherited sympathy for one side or the other and an antipathy for the Redcoats who burned Washington.

Yet, by 1917, we declared war on Germany and Austria-Hungary but not Bulgaria and Turkey. We chose not to be an “Ally” this time but instead an “associate” of the Western powers. Our experience with Allies went back to the American Revolution and recently to the Boxer Rebellion. It was uncertain in 1917 whether we would send troops overseas but ended dispatching two million. This was not our first foreign foray, but the Mexican and Spanish-American conflicts had been wars of conquest and the Quasi-War with France and the War of 1812 to protect our Rite of Passage and Freedom of the Seas.

It's hard to remember how strong the opposing points of view were then though actually no vital interests — economic or military — were at stake.

The book does an excellent job of quoting varying reactions in the press and from public figures. The close and exciting 1916 election is well covered. For those with military interests, there is a good amount about the Preparedness Movement, which actually started at the beginning of the 20th century with the Elihu Root Reforms of a general staff, chief of staff, Army War College, and the Militia (Dick) Act. There was Pershing's Punitive Expedition and the call-up of the National Guard for service on the border in 1916. The latter provided a shakedown, some training, and elimination of deadwood (18 percent failed the physical examination). The chief of staff, MG Hugh Scott, saw little benefit, but 30 years later I served under three major generals of the California National Guard who had been company grade in 1916 and thought it invaluable when mobilized in 1917.

The bibliographic essay of 24 pages shows the wealth of material used. The numerous photographs help bring life to the story. There is more detail and explanation than I've read before, but it is intended for those with a special interest in this topic and not for the general public.

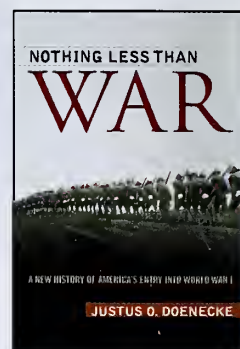




Photo by SGT Michael J. MacLeod

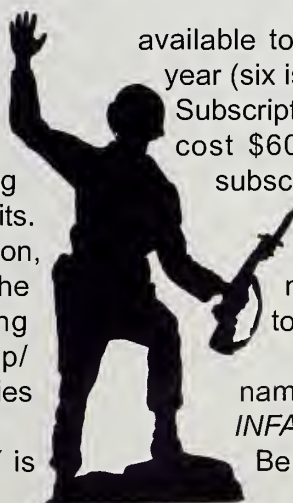
Soldiers with the 82nd Airborne Division's 1st Brigade Combat Team walk through a bazaar along Highway 1 in Ghazni Province, Afghanistan.

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